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THE RETROBATES

WHAT'S YOUR FAVOURITE OUTRUN 2 MOMENT?

DARRAN JONES

Tearing through Cloudy Highland with *Risky Ride* blaring, as it reminds me of when I went on a bird-watching trip to Scotland.
Expertise: Juggling a gorgeous wife, two beautiful girls and an award-winning magazine, all under one roof!
Currently playing:
The Legend Of Zelda: Ocarina Of Time
Favourite game of all time:
Strider

TIM EMPEY

Watching Darran playing *OutRun 2* every lunchtime for a period of about three months with a massive grin on his face, back in 2006.
Expertise: Finishing Game Pass games before they go
Currently playing:
Monster Hunter Rise: Sunbreak
Favourite game of all time:
God Hand

NICK THORPE

Back in 2004 I volunteered on an OAPs' coach trip to the beach, hoping to find an arcade with *OutRun 2*. I did, and on my first go I crashed so badly that even the partially blind lady my mum was caring for saw it and laughed.
Expertise: Owning five Master Systems and a Mark III
Currently playing:
The Legend Of Zelda: Tears Of The Kingdom
Favourite game of all time:
Sonic The Hedgehog

ANDY SALTER

As someone who doesn't really play racing games, or visit the arcades, or owns an Xbox it will be no surprise that I've never played this.
Expertise: Modding games, no 'vanilla' versions for me, thanks!
Currently modding:
Kenshi Universal Wasteland Expansion Mod
Favourite game of all time:
Rome: Total War although I guess it's the *Remastered* edition now.

RORY MILNE

There's sheer joy to be had from drifting around the bends in *OutRun 2*, as the sun beats down, the music plays loudly and your attractive female passenger fist pumps the air.
Expertise: The game that I'm writing about at the time of writing
Currently playing:
Ridge Racer
Favourite game of all time:
Tempest

PAUL DRURY

I have a very personal connection to *OutRun 2*. I vividly remember my review copy arriving on the morning of my wedding in 2004. I was smiling all day. For many reasons. And it was a memorable wedding night.
Expertise: *The Lumberjack Song* (bit-tune version)
Currently playing:
Puzzle Bobble
Favourite game of all time:
Sheep In Space

PAUL ROSE

With any *OutRun* it's about those endless blue skies for me.
Expertise: Winging it
Currently playing:
The Legend Of Zelda: Tears Of The Kingdom
Favourite game of all time:
Half-Life 2

MARTYN CARROLL

Playing the pre-release Xbox version of *OutRun 2* at the ECTS event in London and realising that Sumo Digital had produced a perfect conversion.
Expertise: Sinclair stuff
Currently playing:
The Legend Of Zelda: Tears Of The Kingdom
Favourite game of all time:
Jet Set Willy

ANDREW FISHER

Playing *OutRun 2* against Jeff Minter on linked Xboxes, and overtaking him just before the finish line.
Expertise: Forty years of gaming, from Commodore 64 to Switch
Currently playing:
Dango Dash
Favourite game of all time:
Wizball

LOADING...

I absolutely adore *OutRun 2*. It's not only my favourite game in the series, but my favourite arcade racer of all time. I first discovered it at Bournemouth Pier's arcade and its insane powersliding and exciting visuals completely floored me. I would often play it at lunchtimes and I was lucky enough to review Sumo Digital's excellent Xbox adaptation when I worked on *games™*. I still play *Coast 2 Coast* regularly to this day (*Risky Ride* is my song of choice) and it's a game that always manages to make me smile.

What a delight then to not only feature it on this month's cover, but to complement it with an incredible 32-page book that contains no less than 40 amazing Sega arcade games – from *Out Run* and *Virtua Fighter* to *Zaxxon* and *Dynamite Dux*. Nick and I have had a lot of fun putting it together and we hope you enjoy reading through it.

In addition to our fantastic *OutRun 2* coverage, this month's issue features articles on *Ghostbusters*, *Magic Pockets* and Matt Householder, behind-the-scenes features on *Blade Warrior*, *Clockwork Knight* and *Turbo The Tortoise*, and we speak to ex-Toaplan staff about the studio's many great arcade games. Oh, and there's a great new subs offer for you to discover on page 30.

Stay safe and enjoy the magazine.

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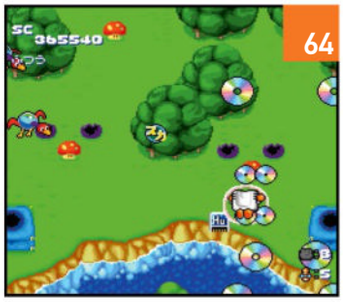

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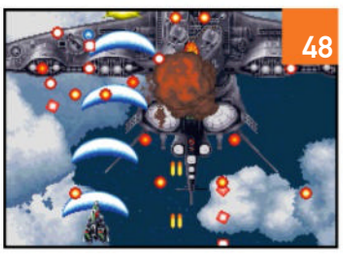

The Legend Live On: 20 Years Of OutRun 2
Discover how the talented developers at Sumo Digital adapted Sega's incredible arcade sequel for a home audience

The Making Of: Blade Warrior
Jason Kingsley revisits his extremely moody 16-bit hack and slash

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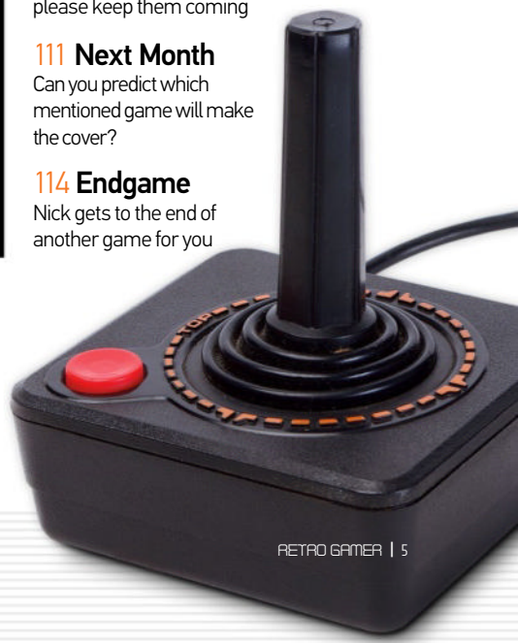

» Dominik Diamond introduced the challenges for the Retro Championship.

ONE LIFE LEFT 2023

Faith Johnson reports on Norwich's premiere gaming convention

» Theresa – retro Twitch streamer Game Mistress – was a big hit with gamers at OLL '23.

» Jon Gage just about had time for a photo while overseeing a busy weekend.

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Faith Johnson visits the fast-growing Norwich-based gaming event

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This month, Paul's done a little experiment and has used ChatGPT. What on Earth is going to happen?

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Philip Oliver chats to us about RichCast, a brand-new app for making old-school adventures

16 BACK TO THE NOUGHTIES
Nick faces the dangers of travelling through time so you don't have to

Back for its second year, One Life Left, also known as OLL, brought together gamers from across the country for a weekend of entertainment, competitions, exhibits and plenty of hands-on retro fun. The convention took place at Norwich's Norfolk Showground between 15 and 16 April with the aim to bring a wide variety of gamers, developers and exhibits together while celebrating games old and new.

Jon Gage, the event's head organiser, told us that, "Games are for everyone and while people will have their own favourite games and genres, a physical convention brings everyone together to celebrate this shared interest.

» Faith takes time out from covering the event to show off some silky *Sonic* skills.

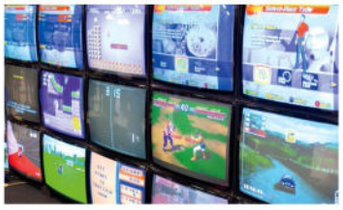
We made a conscious effort to showcase as much variety as we could at OLL '23, including both retro and modern indie titles, and both smaller and larger content creator guests."

While all the glitz and glamour you would expect from a major videogame event was on display, there was also a strong grassroots community feel that is important to the organisers. Community projects, such as Norwich Amiga Group and the Nottingham-based ItsMuchMore, put on excellent exhibits for attendees, with Jon explaining that, "Having a local feel to the event is one of our unique attributes. There are some fantastic large gaming events across the country, but our approach allows us to deliver a more personalised service to both our attendees and our exhibitors, and this allows us to create that special atmosphere that larger events might not always be able to do."

The sense of community was further cemented by the local businesses invited to set up stalls, which created a busy market in the centre of the venue. There was a great mix of games, collectables and retro-tech to peruse and the market also provided a vibrant social space for gamers to chat and catch up. Another aim of OLL '23 was to provide fun for families and not just older retro fans. Seeing all the younger gamers run from console to console, eyes wide in amazement playing the games their parents enjoyed, was one of the convention's successes. There was a sense that retro games can be just as exciting for a new generation of gamers now and not just those who remember them the first time around.

The large stage at the back of the venue featured a huge screen accompanied by a loud PA system that filled the entire space. A DJ played retro-inspired music throughout the weekend, that went down well with attendees. Situated in one corner was Norwich Retro Gamers which had tables filled with CRT televisions and retro consoles, computers and curios for attendees to enjoy. Everything

» Content creators, such as Middle Aged Gamer Guy, were on hand to meet fans.



» There were lots of CRT televisions on show displaying many classic games.

» The market area had lots to keep collectors happy including RAW Talent Art's custom consoles.

from the usual Mega Drives and Spectrums to more obscure items such as a Panasonic CD-i were being exhibited. There were also developers showcasing new games for old consoles in the indie game area that gave a glimpse of some exciting titles coming this year.

Near the front of the venue was a special area for the weekend's guests to base themselves. Popular YouTube personalities such as Kim Justice and Slope's Game Room were present to greet fans and let them grab those obligatory selfies. And it wasn't just UK-based retro content creators in attendance, Jon Riggs and Adam Koralik made the trip from America to greet retro fans as well. Theresa, known as retro streamer Game Mistress on Twitch, also brought her own brand of retro gaming from Sweden and was a big hit with the crowds.

When asked how she felt about the convention Theresa said, "I love the retro-gaming scene and it's growing every year. It's refreshing to see a huge diversity of people enjoying the things we love about retro gaming. The organisers have gone above and beyond. It's wonderful meeting like-minded people and I've made some incredible friends in the UK."

» A number of talks were available that proved popular with attendees.

The guests were also involved in the stage events with many having a retro twist. There were interesting talks about retro-gaming history and entertainment shows such as a retro-inspired team quiz. The large crowds were most excited by the gaming championship that was fiercely contested and featured a wide range of games for the guests to battle over including *Pilotwings* and *Crazy Taxi*. OLL has gone from strength to strength and has positioned itself as a major event on the retro-gaming calendar. Jon backs this up by explaining that, "As OLL grows perhaps we can begin to attract bigger industry publishers to future events, but up to this point our core focus has always been on the historical side of gaming." What is certain is its blend of traditional convention staples and community-focussed engagement, as well as the diversity of exhibits and entertainment, make it the perfect celebration of everything retro.

> "It's refreshing to see a huge diversity of people enjoying the things we love about retro gaming"
>
> **GAME MISTRESS**

Faith Johnson was invited to take part in OLL '23's Retro Championship and was also a team panellist on the retro quiz.

RETCON RETURNS TO LONDON

Retcon is back at the Greenford Community Centre on 17 June 2023. The event will be hosted by the Greenford Computer Club and is open to gamers of all ages and their families. Attendees will have the chance to indulge in many retro-gaming activities including competitions and exhibits. Industry veterans, such as the Oliver twins, will be in attendance hosting panel talks and seminars for attendees.

GAMING RETURNS TO NOTTINGHAM

Nottingham Video Games Expo returns for its second event on 22 July 2023. Hosted at The Belgrave Rooms in the heart of Nottingham's city centre, it promises a whole day of retro-gaming tournaments, exhibits, panel talks and stalls. Derby Computer Museum is showcasing gaming history through its collection of consoles and computers and Nintendo Nottingham is hosting a *Mario Kart* tournament throughout the day.

» [Switch] The new high-resolution visuals are particularly noticeable when building a new Magnus deck.

» [Switch] The more Magnus you have, the more opportunities you have during battles.

» [Switch] The original *Baten Kaitos* has a very distinctive style that thankfully appears to have been restored for this remaster.

RETURN TO BATEN KAITOS

Producer Koji Nakajima on updating the classic GameCube RPGs

One of our favourite moments from February's Nintendo Direct was the announcement that *Baten Kaitos* and its prequel were being updated for Nintendo's Switch. Despite receiving a fair amount of critical acclaim on release, both titles flew under the radar of many gamers and the second game, *Baten Kaitos: Origins*, didn't even receive a European release, staying exclusive to Japan and the US.

"The character design, background music and other aspects of *Baten Kaitos* were developed by very talented creators [Monolith Soft and tri-Crescendo], and the RPG series is highly acclaimed by customers as a masterpiece," Koji Nakajima, who is producer on the remaster, proudly tells us. It makes sense then that Bandai Namco would want to give the series another release, particularly when you consider how big the Switch's install base currently is.

If you've never played *Baten Kaitos: Eternal Wings And The Lost Ocean* (to give it its full name) before then you're in for a treat. It's an entertaining RPG with a bunch of colourful characters, exotic locations and a distinctive battle system that utilises playing cards known as Magnus. "Each character has a deck of cards called Magnus and in battle, the player attacks or heals by selecting a Magnus drawn from the deck," Nakajima explains. "There are also unique and strategic elements, such as the Ice Magnus that becomes Water over the course of multiple turns that can then heal characters."

What's particularly interesting about this remaster is that it's only currently earmarked for Switch. "Having both remastered versions of these two games included in one cartridge is perfect, as there is a lot for the player to discover or enjoy," offers Nakajima. "Nintendo Switch is just right for savouring the game at home or anywhere else you like."

While the two games haven't been overhauled in the same way Bandai Namco's recent *Klonoa* games were, Nakajima highlights that they've still received a lot of work to make them suitable for modern screens. "The main characters, battle backgrounds, bosses, etc have been remodelled and brushed up from the original models, and the towns and dungeons, which are expressed in 2D, have been remade in high resolution so that they are displayed beautifully, while maintaining the original art styles and assets," he says. "Since this remaster is created from the original classics, we have taken care not to disrupt the atmosphere and feel of the original games." Nakajima did admit however that

» [Switch] Nakajima told us, "We have improved the visual quality of the UI, improved graphics of the main characters and field objects and added more post-effects."

» [Switch] There are a lot of enemies to battle in the original *Baten Kaitos* so making sure you have the right set of Magnus is imperative.

> "We want to make them accessible not only to users who played the original ones, but also to new users"
>
> **KOJI NAKAJIMA**

converting the games from 4:3 to 16:9 did present minor problems, saying, "It was quite challenging to fix them one by one."

Not content with enhancing the visuals of both games, the developers have also added numerous quality-of-life improvements. "In addition to stabilising the framerate, we have added an auto-battling function, a skip function in some events and cutscenes, a function to turn off random encounters with enemies and an auto-save function," he says.

Nakajima feels these changes are important, not just in *Baten Kaitos*, but remastered games in general. "We want to make them accessible not only to users who played the original ones, but also to new users," he explains. "For this reason, we need to bring the graphics closer to expressions that suit the current era, and it is essential that the game is easily playable by new players through improving usability. I think it is very significant and important to make improvements in remastered games. We also feel that the ways to enjoy videogames are becoming more and more diverse. Therefore, in this remaster, you can customise by yourself the various new mechanics. There are players who are not too good at games, there are players who want to focus on enjoying the story, and there are players who have limited time to play games, etc. As different gamers have different playing conditions, I believe that we need to diversify and support different ways of playing for users' preferences and improve usability as a whole as well."

While these improvements are great to see, one disappointing omission is that the English voice-overs found in the original GameCube games will not be returning. We assumed this would be due to potential rights issues, but it appears to be a stylistic choice. "While developing this remastered version, we needed to adjust some of the expressions to match the current era," Nakajima explains. "Because of this, we made the difficult decision not to use English voice-overs for the remastered version, which would have resulted in a discrepancy with the changed expressions."

While it's disappointing that the original English voice cast is absent, at least the games themselves are returning and we were keen to know if this was to pave the way for a potential sequel. "There are no plans for a sequel at this time," Nakajima tells us. "Our focus right now is to make sure that these Japanese RPG classics created by their great creators are remastered well and delivered to the players in their best condition, and to make them happy and excited." We'll certainly settle for that.

» [Switch] If you like collecting games like us, you'll be pleased to hear *Baten Kaitos 1 & 2 Remastered* will be receiving a physical release in Europe.

» [Switch] Some fans have expressed disappointment that the remastered games don't run at 60fps but 30fps is typically fine for these sorts of games.

» [Switch] Both games are filled with interesting characters to meet and some even join your party.

Who is Iain Lee?
Iain Lee is a freelance broadcaster who loves gaming, particularly retro gaming. Join him as he hosts a phone-in show and plays games at www.twitch.tv/iainlee and also check out www.patreon.com/iainandKatherine

Our friends are all aboard

I am very late to the *Sea Of Thieves* party, but what a party it is. I'd been aware of it for a while. I'd seen podcaster and streamer Sean Bell had been playing it and labelling his streams *Sea Of Friends*. A really joyous and gentle stream that did have real moments of tension when some sweaty kids would arrive and do everything they could to sink The Good Ship Bell. As a viewer it was thrilling, I now know as a captain or member of the crew, it is bloody annoying.

Actor James Buckley also played the game online. It looked ridiculously hard to me. How do you know where to get the skull that activates the doo-dah that unleashes the ghosts that then fires the cannon?

About a month ago my 11 year old asked if I'd heard of the game. One of the things that brings me great pride is that I can talk about videogames with my kids. Not only can I talk about them, I play them. I've asked if any parents of their friends are gamers and it would appear that I am the only one. That does give me some cache in their eyes.

Anyway, Kim asked if I knew about *Sea Of Thieves* and I told him I did but had never played it. He told me it was a lot of fun and we should play together. Twenty-four hours later, the game is downloaded and the tutorial completed. Cue me and one of my boys sailing the Seven Seas having an absolute blast. Perhaps I should be a little worried at how much Kim liked to get drunk and then puke on me (in the game, in the game) as it feels a little close to how my life actually turned out, but maybe I'm being over cautious.

We had three weeks of intense fun. We'd text each other to see if we were both free to play. We did some quests, got some gold… it was great.

Then the other week the texts stopped. Mine were ignored. I called to see if everything was OK. "Do you want to play *Sea Of Thieves?*", "Not today daddy." OK, that's how it goes sometimes. Then the kids came and stayed with me. I walked into the living room to ask if he wanted to play and I saw he was already steering his ship through choppy waters. "Who are you playing with, Kim?" I asked. "Just some rando." "Do you want me to jump in?" "Nah, it's OK."

Now, he did not say that to hurt me or annoy me. I clearly wasn't available enough for him because of my work so he'd found someone else to play with and he was doing great. He'd made enough gold to buy his own sloop and was way beyond my skill level now. And that's what being a parent is, right? You hold your kids' hands for a bit until they're confident enough to run off on their own. This was just another example of that. It hurt but I got it. I love my kids and want them to be happy and part of this is all part of it. So… any randos out there wanna kill some ghosts with me?

> "We had three weeks of intense fun"

Do you agree with Iain's thoughts? Contact us at:

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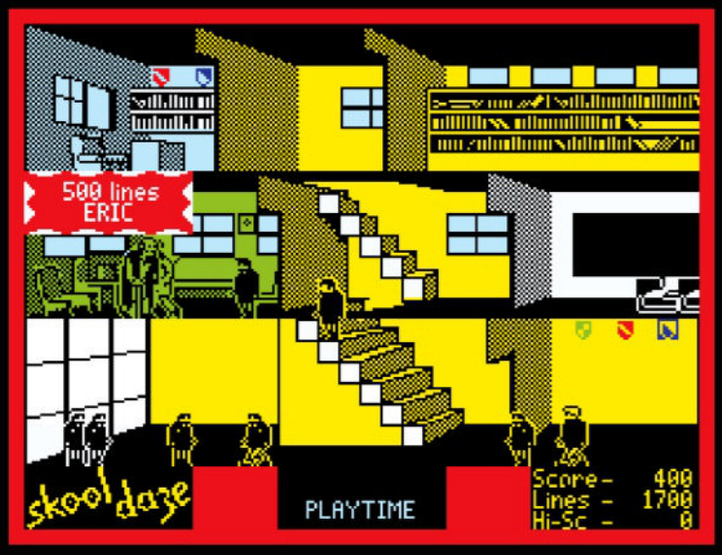
Who is Paul Rose?
Paul is probably better known as Mr Biffo – the creator of legendary teletext games magazine *Digitiser*. These days, he mostly writes his videogame ramblings over at Digitiser2000.com. If you want more Biffo in your eyes, you can catch him as the host of *Digitizer The Show* at www.bit.ly/biffo2000.



Rise of the machines

Unless you've been sleeping with your head beneath a supercomputer mainframe for the past 12 months, it is unlikely to have escaped your attention that the AI apocalypse is finally upon us. Rather than the Hollywood version that we've been conditioned to believe will happen, the true war with the machines is far more insidious, beginning with stealing work away from artists, writers and other creative people.

Allegedly, I'm a creative person by trade, so I suppose I should be more scared than I am. Certainly, I had a wobble at the start of this year where I began to wonder whether I'd lose writing gigs due to AI. However, then I had a word with myself and realised I'd been here before.

Lest we forget, I used to work for Teletext – a company and a medium that I saw throttled by the internet during my watch. Sure, we could all have stood there like King Canute, yelling at the turning tide to keep away from our pixels, but it would've been futile.

I, like everyone, simply started using the internet for, well, everything. Reference books didn't go away because of the internet any more than music went away when Napster first reared its head. Hoping to get in on the ground floor, I quickly started using ChatGPT as just another tool to help with work; for spelling, grammar, to bounce ideas off…

What it isn't good for – yet anyway – is replacing the part of my work that's uniquely, distinctively me. The part of me that would think to write the word 'bum' in a sentence for no good bum reason. But can it replace me as a columnist for **Retro Gamer**? Let's ask it for 100 words on retro gaming:

Retro games are a cherished part of gaming history, offering a unique and pure gaming experience. These games' simplicity, iconic graphics and 8-bit soundtracks have become a hallmark of their charm. Retro games are often associated with arcade culture and have built a strong sense of community around them. Playing these games can transport players back to a simpler time and evoke feelings of nostalgia. Whether you grew up playing them or are discovering them for the first time, retro games offer a glimpse into gaming's rich history and remind us of the joy and excitement that videogames can bring.

So far so anodyne, but let's see if – as we're warned – it's cribbing from existing work. Let's get more specific, and ask it for 100 words on one of my favourite games, in the style of Mr Biffo:

Gor blimey, Skool Daze *is a proper 'ave-it game, ain't it? This little gem from 1984 is the perfect example of old-school 8-bit gaming – simple, addictive, and as tough as a brick wall. In the game, you play as Eric, a scrappy little nipper who's always getting into trouble at school. Your mission, should you choose to accept it, is to navigate the school, avoid the strict teachers, and get your homework done before the end of term. But watch out – one wrong move and you'll end up in detention faster than you can say 'maths class'. It's a right challenge, but* Skool Daze *is the dog's danglies, and anyone who says different can do one!*

I mean, I don't know whether to be offended, flattered, or sick.

> "I, like everyone, simply started using the internet for, well, everything"

Do you agree with Paul's thoughts? Contact us at:

RetroGamerUK @RetroGamer_Mag retrogamer@futurenet.com

NINTENDO SWITCH

" The Other World Stream "

CHARADE MANIACS

"Welcome to Arcadia!"

27/6

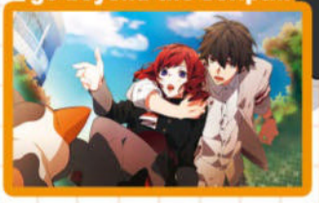
Releases

27 JUNE 2023

"THE OTHER WORLD STREAM"

Unable to fully trust anyone, whose hand will Hiyori take in the end?

Chemistry on stage may go beyond the script...



But with a traitor afoot, who can you really trust?

Charade Maniacs

Can you trust someone who might be a traitor?

PRE-ORDER NOW !!

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Witness the drama unfold with 9 others for your chance to escape

12 www.pegi.info

!f IDEA FACTORY

Otomate

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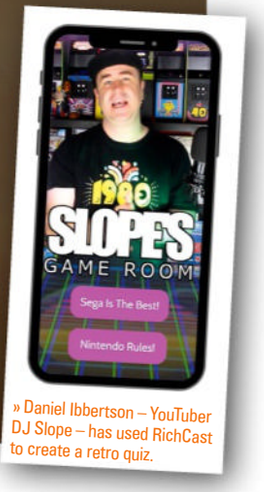
Nintendo Switch™ is a trademark of Nintendo.

"Welcome to Arcadia!"

» A game made on one system will automatically appear and run across all devices.

» Panivox is headed by founders Philip and Andrew Oliver (left and right) along with Neil Campbell (centre).



» Daniel Ibbertson – YouTuber DJ Slope – has used RichCast to create a retro quiz.

RichCast

Philip Oliver on the immersive storytelling app evoking memories of age-old adventures

RichCast allows anyone to create and share linear interactive stories that are similar in structure to Choose Your Own Adventure games. Available for multiple platforms and requiring no knowledge of coding, users can play around with an easy-to-learn editor, producing titles that players can interact with verbally or by pressing buttons on the screen. Legendary games developer Philip Oliver tells us how he came to be involved.

How did RichCast come about?

My brother, Andrew, and I sold Radiant Worlds to Rebellion in 2018 and we began giving lectures at universities around the UK about the games industry. We'd talk about the opportunities for new and creative games and apps and ask students to think about something they'd like to see exist. We noted that students learn Unity which is a big undertaking. We wondered if there could be a higher-level solution that was much easier for everyone to use – in the same way Wix and SquareSpace let people make websites without learning HTML. We also talked about the problems inherent with cross-platform games development and how the same issues didn't face people making podcasts or YouTube videos. And we also discussed the pain of installing, updating, offloading or deleting multiple apps. We felt a system like Spotify, Netflix or YouTube for games would work– something allowing creators to develop and instantly update their games that'd give players access to a wide range of interactive titles.

When did development begin on this project?

Neil Campbell [the cofounder of Viewpoint Games] contacted us in early 2020 to discuss a bunch of business stuff. During the conversation, we shared details of our idea which included our thoughts on how voice input is underused in games. We said we can talk to Siri, Alexa and Google Assistant but we can't talk to characters in games. We felt there was a good opportunity to lead the way. Neil began to think about the idea and, as COVID lockdown changed everyone's agendas, he created a small demo in Unity to show a simple branching narrative editor that could create interactive stories controlled by voice.

What did the demo do?

It enabled a creator to lay out a basic flowchart with nodes for Speak and Listen which allowed for a branching – therefore interactive – story to be created. We felt this was an excellent solution and the more we thought about this the more we

» There are lots of experimental games to try including *A Little Off The Top*.

» All of the games, including *911: What's Your Emergency*, are made available to play within a single app and they can be updated by creators.

felt this was very easy to use but could be very powerful too. We agreed to form a new company together, Panivox.

To what degree was RichCast inspired by text adventures, or even graphic adventures such as *Dizzy*?

When we started playing games in the early Eighties, we enjoyed *Zork II* on the Apple IIe and all the Acornsoft text adventures on the BBC Micro. These helped inspire our *Dizzy* games, which were half-way between text-based adventures and classic platformers. So for almost 40 years we've been making story-based games and we're always thinking about ways to optimise and improve development pipelines. RichCast takes these principles to a whole new level.

How long would it take someone to create a decent game with RichCast?

Developing an interactive story in RichCast is well over ten times faster compared with traditional methods – and you don't need to know how to program or use a middleware game engine like Unity. A decent length story of between 15 and 30 minutes on mobile would probably take someone a couple of days to write in RichCast, with more time needed for good visuals and audio.

One of our team, assisted by ChatGPT, wrote a seven-minute interactive story in two hours – it would take another day or two to add great art, music and sound effects. When Andrew and I took part in this year's Global Game Jam, we wrote a 30-minute murder mystery story called *Roots And Shoots* in 48 hours. We created all the text, graphics and audio and players quiz many characters across various locations to discover the killer and motive.

Is there an opportunity for past text adventure creators to port their games to RichCast?

We'd love classic text adventures to be added to the RichCast library. A good interactive story is a good interactive story whenever it's told, and RichCast allows those stories to be easily brought up to date. Interactive stories are very casual games and they work really well on mobiles.

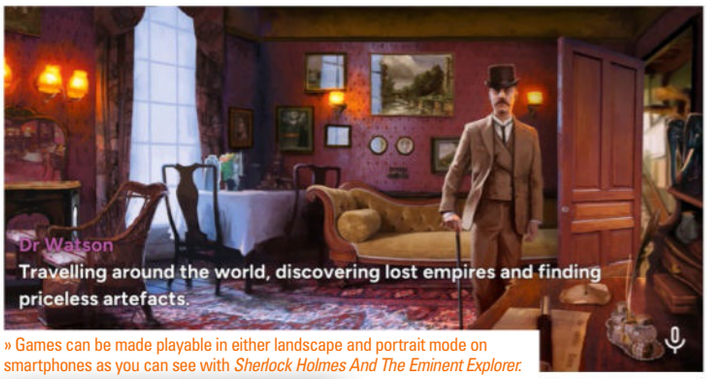
But are people only using RichCast in order to create interactive stories?

No. Whilst RichCast works well for interactive stories, it can be used for any interactive media and works well for escape rooms, quizzes and puzzles. We have a few quizzes already and have some escape rooms and puzzle games in the pipeline.

> "RichCast takes these principles to a whole new level"
>
> **PHILIP OLIVER**

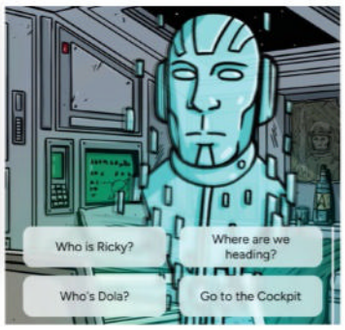
Which titles have impressed you most so far and why?

Well, Jason Michael's *Mobile Magic* is really different and entertaining – you get to take part in close-up magic with real magician Jason Michaels. It demonstrates a different use of RichCast and it's also great fun especially given I love magic! Then there's *A Little Off The Top*. It has no visuals and asks you to close your eyes whilst you have a haircut that might not end so well depending on what you say. It's creepy!

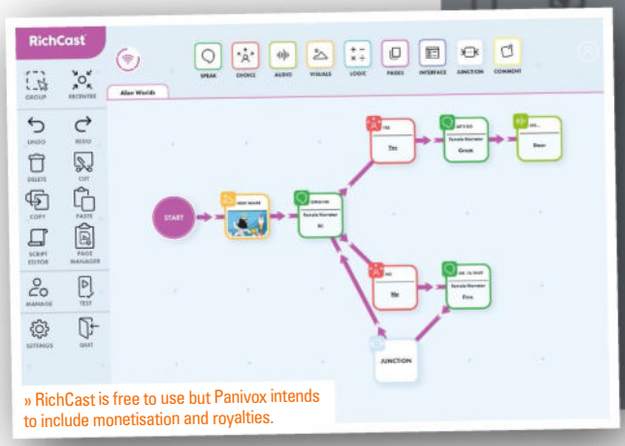


» Games can be made playable in either landscape and portrait mode on smartphones as you can see with *Sherlock Holmes And The Eminent Explorer.*

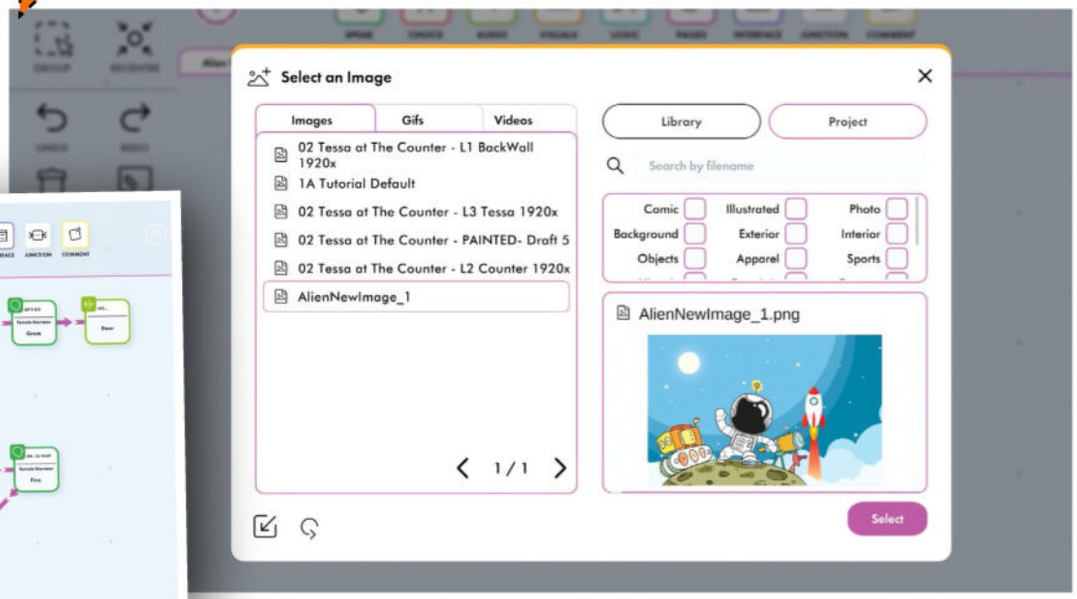
» *Roots And Shoots* was created by the Oliver Twins in just two days.



» *Pegasus Lost* has been created by comic book writer Dan Whitehead.



» RichCast is free to use but Panivox intends to include monetisation and royalties.



» RichCast is available on Windows, Mac, Android and iOS, with an intention to expand to consoles.

BACK TO THE NOUGHTIES

» [Xbox 360] The massive zombie hordes in *Dead Rising* really signalled the arrival of next-generation games.

OCTOBER 2006 – With the holidays and two new consoles fast approaching, a glut of quality software threatens to keep players glued to their hardware. Nick Thorpe braves another strange journey to bring you yesterday's hottest stories

NEWS OCTOBER 2006

Tech giant Google announced its intention to buy YouTube on 10 October, in a deal worth $1.65 billion. According to Comscore the video-sharing platform had experienced explosive growth, going from 2.8 million unique users per month to 72 million in the space of a year. Both companies also announced deals with Universal Music Group, Sony BMG and Warner Music to host videos.

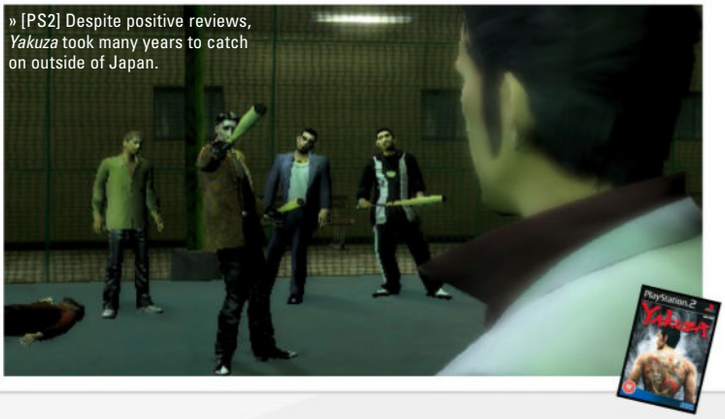
Farepak collapsed into administration on 13 October, meaning that 116,400 customers would not receive the Christmas hampers they had been paying for throughout the year. Companies including Tesco, BSkyB, Sainsbury's and Marks & Spencer all donated to a fund to help affected families – as did the bank HBOS, which recouped its £31 million loan to Farepak in full while Farepak's customers would receive just 15p for every £1 they had saved.

On 14 October, two Chelsea goalkeepers suffered serious head injuries during a Premier League match against Reading. Petr Cech sustained a depressed skull fracture in a collision with Stephen Hunt after only 16 seconds, and would wear a rugby-style headguard for the rest of his career. Substitute Carlo Cudicini was concussed in the second half.

THE LATEST NEWS FROM OCTOBER 2006

Sony and Nintendo might have been preparing to unleash shiny new hardware, but the Xbox 360 was retaining player attention with games like Capcom's *Dead Rising*, which offered a journalistic mystery to uncover and a mall full of zombies to slaughter. In a 9/10 review, *games™* called it "one of the most ambitious, shocking and hilarious games to have ever been created", while *Official Xbox 360 Magazine* gave the same score, saying that, "If George Romero ever decided to make a game of *Dawn Of The Dead*, this would be it." *Edge* felt it was, "Thematically eccentric, mechanically shambolic and technically stunning," giving it 8/10, and it also scored 4/5 in *360* and 9/10 in *X-360*.

Also on the Xbox 360, open-world racer *Test Drive Unlimited* scored 7/10 in *games™*, 8/10 in *Edge*, 4/5 in *360* and 9/10 in *Official 360*. The official magazine praised it for having "1,000 miles of fantastic, wide, twisty roads to race along in the world's hottest supercars", while *games™* felt that it was "occasionally excellent when racing against humans" but that the developers "forgot to inject enjoyment into the single-player experience". Open-world crime-'em-up *Saints Row* scored 8/10 from *X-360*, 4/5 from *360*, 7/10 from *games™* and 6/10 from *Edge*, which described it perfectly as "a stopgap between two *GTA* generations".

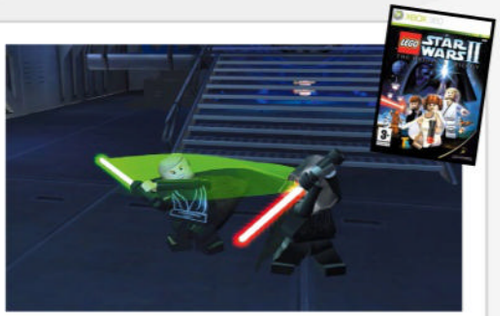


» [PS2] Despite positive reviews, *Yakuza* took many years to catch on outside of Japan.

The venerable PS2 also showed no signs of going away quietly. *Yakuza* might have had sufficient profanity "to make Tarantino blush" but that didn't stop *games™* giving Sega's action RPG 8/10, and *Edge* awarded it the same score, calling it "the kind of game whose characters will be cried out for in sequels, and cried over if no such follow-ups appear". *Play* was disappointed that it wasn't "the sandbox experience that it promised to be" but still awarded it 79%.

Strategy RPG sequel *Disgaea 2: Cursed Memories* earned 7/10 from *Official PlayStation 2 Magazine*, 83% from *Play* and 9/10 from *games™*, which noted a depth that made it "an intimidating prospect for the casual PS2 gamer". Namco's *Ace Combat: The Belkan War* scored 6/10 in *games™* for being "more of the same" but received 8/10 from *Official PS2* and 80% from *Play*, the latter commending it for making the player "feel a little bit like Anthony Edwards in *Top Gun*". *Devil May Cry 3: Special Edition* scored 8/10 in *Official PS2* and 92% in *Play*, which simply said "buy it" 34 times in a row.

Making a multi-platform impact, *Lego Star Wars II: The Original Trilogy* earned 93% from *Official Nintendo Magazine*, 9.4/10 from *Official Xbox Magazine*, 9/10 from *Official 360*, 9/10 from *Official PS2*, 89% from *NGamer*, 88% from *Go Play*, 88% from *PC Gamer* and 7/10 from *Edge*. *PC Gamer* felt it was "an action puzzle game for all brains great and small", with "no sci-fi indulgence" and "no grim *Star Wars* fanboyism". Annual sports update *Madden NFL 07* earned 85% from *Play*, 8.8/10 from *OXM* and 9/10 from *Official PS2*, which declared it "accessible and comprehensive".

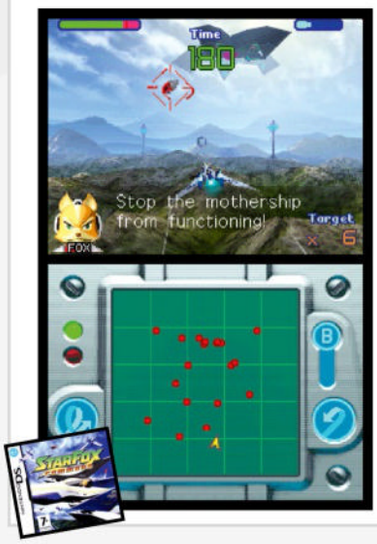


» [Xbox 360] The brave Captain Kirk fends off a random baddie with his lightsaber.

PC gamers also had a bumper month. *PC Gamer* gave *Company Of Heroes* a whopping 94%, praising it for its graphical quality and specific roles for every unit and likening it to "[*Warhammer 40K:*] *Dawn Of War* dialled to 11, played through speakers the size of Canary Wharf, sung by Hitler in a robot suit". Fans of serious racing games could pick up *GTR2*, which earned 9/10 in *Edge* and 92% in *PC Gamer*, the latter declaring it "the finest, most complete racing sim ever". Western-themed first-person shooter *Call Of Juarez* also scored 85% in *PC Gamer*, which asked, "When was the last time [...] you could make your horse slide down the face of a cliff, shooting with the six-gun in your left hand while reading from the Bible in your right?"

The handhelds also held their own. *Every Extend Extra* for the PSP scored 8/10 in *Edge* and 91% in *Go Play*, with the latter saying that the adaptation of the bomb-blasting PC indie hit, "Looks weird but plays great." *Star Fox Command* for the DS scored 7/10 in *Edge*, 8/10 in *games™* and 89% in *Revolution*, which said "it's not *Starfox* in the true sense", but that the strategic planning element was a "nice twist". Japanese GBA import *Rhythm Tengoku* scored 7/10 in *Edge* and 80% in *NGamer*, but would never see a UK release.

Join us again next time, when the PlayStation 3 and Wii arrive. ✱



» [DS] It's not traditional by the standards of the series, but it's not bad either.

» [PC] This carefully crafted press screenshot shows the carnage *Company Of Heroes* can generate.

CHARTS

OCTOBER 2006

XBOX 360

1 – **Prey** (2K Games)
2 – **The Lord Of The Rings: The Battle For Middle-Earth II** (EA)
3 – **The Elder Scrolls IV: Oblivion** (2K Games)
4 – **Rockstar Table Tennis** (Rockstar)
5 – **Project Gotham Racing 3** (Microsoft)

PLAYSTATION 2

1 – **Cars** (THQ)
2 – **Pirates Of The Caribbean: The Legend Of Jack Sparrow** (Ubisoft)
3 – **Formula One 06** (Sony)
4 – **Over The Hedge** (Activision)
5 – **Need For Speed Most Wanted** (EA)

PC

1 – **The Sims 2** (EA)
2 – **The Sims 2: Open For Business** (EA)
3 – **Civilization IV: Warlords** (2K Games)
4 – **Civilization IV** (2K Games)
5 – **Rise & Fall: Civilizations At War** (Midway)

MUSIC

1 – **Welcome To The Black Parade** (My Chemical Romance)
2 – **America** (Razorlight)
3 – **I Don't Feel Like Dancin'** (Scissor Sisters)
4 – **Rock This Party (Everybody Dance Now)** (Bob Sinclair & Cutee B)
5 – **Come To Me** (P Diddy ft Nicole Scherzinger)

THIS MONTH IN...

Revolution

The successor to *Cube* has arrived, and it takes a rather interesting approach – alongside the 116-page magazine dedicated to the Wii, two 20-page A5 supplements provide coverage of DS and retro games.

PC Gamer

"E3, as we know it, is dead." The magazine reports that the organisers "want to reduce its size to give the games companies, journalists and other industry people a better chance of evaluating new games".

Official PlayStation 2 Magazine

"They've really made *three* of these?" howls a rather harsh 3/10 review of *Raiden III*. Apparently, it "hasn't a chance of competing with exciting modern shooters – or even the classics of yesteryear".

Front Line

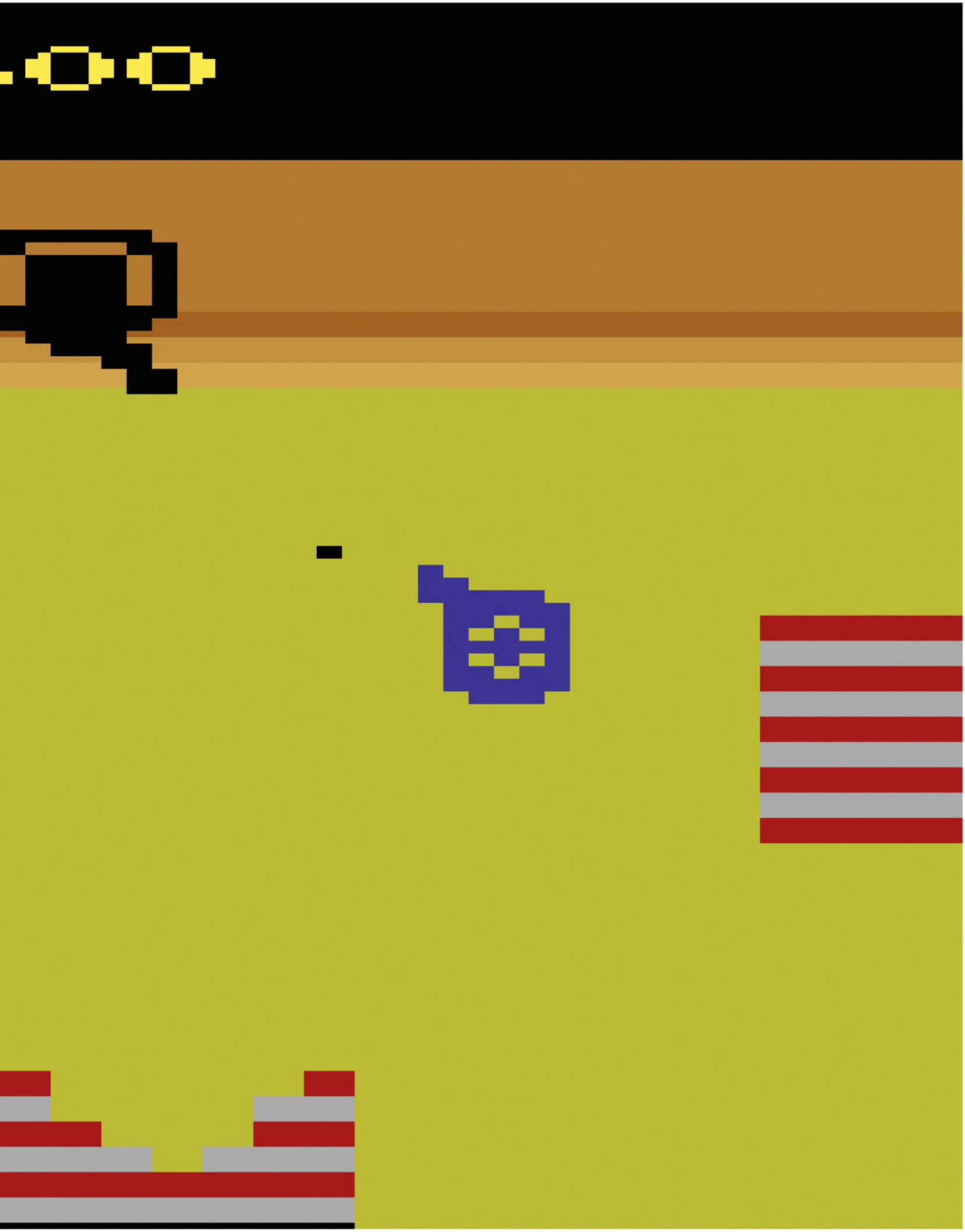
COMING UNDER FIRE

» ATARI 2600 » 1984 » COLECO

When I look at the wealth of home versions of arcade classics available today, many of which are practically indistinguishable from the originals, I can't help but feel that we've been spoiled just a little. Don't get me wrong, I'm not wishing away the work of companies like Hamster, M2 and Digital Eclipse – I just get a little sad when contemporary home conversions of games are dismissed by players. Case in point, I recently read a fairly scathing comment about *Front Line* for the Atari 2600, which dismissed it as a missed opportunity relative to the quality of the arcade original.

Coleco's conversion definitely lacks some major elements of Taito's coin-op – you can't throw grenades, for example. The level designs are necessarily somewhat different, although the concept of progressing through different battlefield environments is carried over successfully, and plenty of incidental details are missing. But really, what was anybody to expect? Coleco's programmers were tasked with translating the game to a limited piece of console hardware that was five years older than the arcade game it was based on. What's more, they couldn't hope to replicate the unusual control setup of a joystick, a button and a push-down rotary dial.

When I look at *Front Line*, I don't see what's missing – I prefer to focus on the smart choices that were made to preserve as much of the arcade experience as possible. The game is responsive and rolling around in a tank is great fun, it looks pretty nice and there's even some great use of context sensitivity to maximise the functionality of the joystick's single button. Sure, it's a little bit too easy to get stuck on trees when you're trying to evade the enemy, but overall it feels like a sophisticated and enjoyable run-and-gun experience – it's just about approaching the game with a realistic idea of what to expect from it and the hardware it runs on. ✱

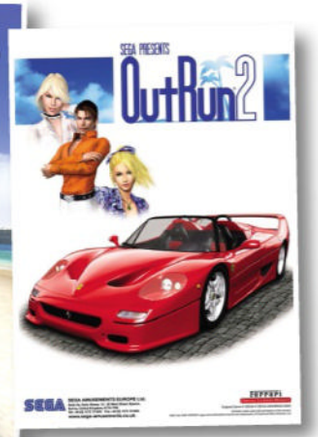


The Legend Lives On:
20 YEARS OF
OutRun2

TWENTY YEARS AGO AN ARCADE RACING LEGEND WAS BORN AND GAMERS WERE TAKEN ON A BEAUTIFUL JOURNEY THAT CONTINUES TO THIS DAY. JOIN US AS WE CELEBRATE THE ANNIVERSARY BY SITTING DOWN WITH SUMO DIGITAL TO CHART THE ENDURING HISTORY OF OUTRUN 2

WORDS BY MARTYN CARROLL

» [Arcade] Did you spot it? The initial coin-op release features a Testarossa with a completely different rear engine grill.



» The legend lives on! *OutRun 2* arrived in 2003, 17 years after the original arcade game.

Sega hasn't always had a perfect record when it comes to updating its popular franchises. We may praise *Sonic Generations*, *After Burner: Climax* and *Streets Of Rage 4*, but then we remember *Shinobi X*, *Golden Axe: Beast Rider* and *Sonic Boom: Rise Of Lyric*.

Such potential for disaster is surely why Sega waited 17 years before it dared to release *OutRun 2*. It wasn't the first follow-up to the revered 1986 original, but it was the first in which original creator Yu Suzuki and his AM2 team could update the game for a new generation – both in terms of hardware and audience.

Their trick was to look at the original and consider what worked – the sense of freedom offered by the branching route, the amazing multi-tune soundtrack, the whole breezy blue sky vibe – and ensure that was all replicated in the sequel. But crucially they also looked at what didn't work.

For many *Out Run* is a true pedestal game. We remember the first time we played it in the arcades and it was so far in front of everything else that it left an indelible mark. We tend to forget that it could be a frustrating, overly difficult experience where a couple of crashes were enough to end your game. We overlook the fact you had to actually use the brakes on the more torturous stages. Pleasant nostalgia hides all of this from us, but thankfully AM2 was not similarly affected when developing *OutRun 2*. The key was the introduction of drifting. The twists and turns were all still there, but now you could take them sideways, effortlessly sliding around the corners without losing speed. And if you did crash out, you'd be up and running much more quickly. But even though it was easier it was not dumbed down. By learning each stage and working out the best racing lines you could shave seconds off your time. The game even included a Time Attack mode that provided players with traffic-free routes on which to secure their best times.

Alternatively, if you wanted something more frivolous there was the Heart Attack mode where your somewhat bossy female passenger gave you a series of challenges to complete. The pure nostalgia stuff was all in there too. The fifteen-stage, five-goal branching structure was reinstated, with Europe's scenic routes once again the backdrop. The Testarossa returned, along with seven other licensed Ferrari models. And Radio Sega was also back, playing the three classic tunes from the original (in rearranged form) plus four brand-new compositions. The result was not just a considered update of *Out Run* but a game that *Edge* magazine called, "A pinnacle of the arcade racing tradition, a peak that may never again be topped."

> "THE FIRST THE DEVELOPMENT TEAM KNEW ABOUT THE PROJECT WAS WHEN A VAN PULLED UP AND DELIVERED THE ARCADE MACHINE TO OUR OFFICES"
>
> **PHIL RANKIN**

OutRun 2 debuted in arcades in December 2003 and was available as a single and a twin cab. Machines could also be linked to allow up to four players to compete against each other. The game ran on Sega's Chihiro hardware which was based on Xbox architecture, so for the inevitable home version it made sense to exclusively target Microsoft's console. For conversion duties Sega looked at a number of external developers and eventually settled on Sumo Digital, a new studio based in Sheffield. Sumo might have been ▶

» Steve Lycett helped design and produce the *OutRun 2* conversions at Sumo Digital.

» Phil Rankin was lead programmer on the Xbox version of *OutRun 2*

» Pete Ellacott coded the PlayStation 2 version of *OutRun 2006: Coast 2 Coast*

» [Arcade] The chicane at the end of the opening Palm Beach stage has caught out more than a few heavy-footed drivers.

WANNABE SEQUELS

CELEBRATING THE EARLIER ATTEMPTS TO EXTEND OUT RUN'S LEGACY

TURBO OUTRUN
1989

■ The first arcade follow-up swaps the original's branching route for a 15-stage cross-country dash and introduces weather, cops, obstacles, rivals and of course a 'turbo' button. It's fast and fun, and the soundtrack is superb, but there's almost too much going on here.

BATTLE OUTRUN
1990

■ Released exclusively for the Master System, this is an unlikely mash-up of *Turbo OutRun* and *Chase HQ*. The idea of purposely smashing a F40-alike into criminals' cars is implausible, and not really in the spirit of the original *Out Run*, but it's an entertaining diversion for the series.

OUTRUN EUROPA
1991

■ Following its home conversions of *Turbo OutRun*, US Gold cobbled together this off-key effort where you drive cars, bikes and even jet-skis on some kind of goofy espionage caper. It appeared on several systems of which the Amiga version (pictured) is the best.

OUTRUN 2019
1993

■ This began life as a generic futuristic racer for the Mega Drive before the *OutRun* licence was slapped on it – and it shows. But as generic futuristic racers go it's not half bad, and ironically it's probably the best *OutRun* game available for the Mega Drive.

OUTRUNNERS
1993

■ The series returned to arcades with this underrated and overlooked entry developed by the AM1 division. It plays like a stepping stone between *Out Run* and *OutRun 2*, harking back to the original while introducing elements that would be carried forward to the sequel.

new, but its founders and most of its staff (which numbered less than 20 at the time) were all former employees of Gremlin Interactive which had closed down in 2003.

One of those ex-Gremlins was Steve Lycett, who was a producer on the conversion and also a huge Sega fan. "I still remember the day we found out we'd been asked to bring it to Xbox," he says. "I'd been tracking *OutRun 2* online since it was announced for the arcades so it was a dream come true to be part of such a legacy. I grew up in the era of arcades and Sega was a real innovator throughout that period. My holy trinity of arcade games is *Space Harrier*, *Out Run* and *After Burner*. Between Yu Suzuki and AM2, you just couldn't wait to see what they did next."

An obvious question is, "Why Sumo?" According to Phil Rankin, lead programmer of the Xbox version, it was simply a case of word of mouth. "We'd done some work for Codemasters, adding online multiplayer to a football game as I recall. Somehow this led to conversations with Microsoft and Sega that ultimately resulted in Sega awarding us the contract for *OutRun 2*. The first the development team knew about the project was when a van pulled up one day and delivered the arcade machine to our offices. As this was the first big project that Sumo had worked on, I think it's fair to say we were *quite excited*."

Despite the distraction of having the coin-op in the office, Phil and his fellow programmers began weighing up the task of converting the game to the Xbox. The hardware might have been alike but this was no simple porting job. "The main challenge was memory," says Phil. "The arcade board had double the memory of the Xbox, so we had to find a way of squeezing a game that already used every byte into half the space. This involved a lot of careful analysis of the levels of detail to understand what was important and what could be thrown away. Switching from a wheel to the Xbox controller

» [PC] An *OutRun* game without a Testarossa would be like a *Sonic The Hedgehog* game without Sonic.

» [Arcade] As in the original game, the left-hand stages offer an easier route to the finish.

» [Xbox] By completing all stage four missions in the Challenge mode you could access the tracks from *Daytona USA 2*

"WE NEEDED TRACKS THAT ALLOWED THE USER TO DRIVE AND DRIFT, AND FROM THE AVAILABLE TITLES DAYTONA USA 2 AND SCUD RACE FIT THE BILL"

STEVE LYCETT

was another challenge. AM2 had already started this work, but it was far from complete. We wanted to maintain the 'feel' of the arcade game while making it playable for everyone. You don't know how many variations on the control scheme we tried in order to get it *just right*.

"Then there was the Xbox hard drive which was… quite slow," Phil says, coughing for effect. "We had to work out how to make those incredibly detailed levels load during the short time the player was driving through the 'bunki' [the connecting section between levels]. You will still occasionally get a situation where you reach the end of the bunki and the level hasn't finished loading. Finally, we decided to throw in a bunch of new missions and stages, and we had to do this while maintaining the whole *Out Run* vibe, and still fitting everything into memory and onto the disc."

Ah yes, the extras. In addition to the three main modes from the arcade game, the Xbox version included exclusive content that was designed by Sumo with input from Sega. "There were concerns that a straight arcade conversion at £40 would lead to negative reviews," says Steve. "This led to the inclusion of online play, the Challenge mode and the new courses." By completing the challenges, which were a mixture of Heart Attack missions and races, players could unlock cars (four new Ferraris joined the garage), music (11 additional tracks were added, including Euro remixes of the original arcade tunes by Richard Jacques – see Richard Jacques Q&A) and even a faithful version of the original *Out Run* arcade game.

Reversed versions of all 15 courses were also unlockable, but it was the bonus stages which wowed the crowd as they were taken from two Sega games which have otherwise never received a home version. "It was a suggestion from AM2 to include tracks from other AM2 games," reveals Steve. "We needed tracks

» [Xbox] The unlockable *Out Run* arcade game featured the Testarossa, but changes were made to some of the traffic to avoid licensing issues.

» [Xbox] The Challenge mode features 101 missions, with the final one being a 30-stage endurance race against a rival.

» The conversion of the original *OutRun 2* was released exclusively on Microsoft's Xbox.

RICHARD JACQUES Q&A

THE AWARD-WINNING COMPOSER ON ARRANGING THE REMIXES OF THE ORIGINAL OUT RUN TUNES FOR THE XBOX VERSION OF OUTRUN 2

What's your opinion on Hiroshi Kawaguchi's original compositions for *Out Run*?
Hiro's music is outstanding and iconic. I remember the first time I heard it as a kid. I was on a summer course in North Devon and found myself in the local arcade one afternoon. This was the first time I had ever seen *Out Run*. The music was the first thing I noticed about the game – the quality of the sound board was so much better than anything I'd heard at the time. And the music itself, wow! Hiro completely nailed the music. It was perfect in every way.

What brief were you given for the 'Euro Remixes'?
I wasn't really given a specific brief, other than to put my own take on the original tracks. So I began by thinking about which musical direction I could take and what styles and influences would work with each track. I immediately thought that *Magical Sound Shower* and *Passing Breeze* would work well with live instruments, keeping the overall Latin/jazz style of the originals but filling out the arrangement, since I wasn't limited to the small number of channels that the original arcade sound board provided. *Splash Wave* is a much more up-tempo and energetic track and therefore I could hear something more electronic working for this track. I then got to work on fleshing out my initial ideas.

Who played instruments on the remixes?
I played most of the instruments but also used session musicians to add the brass section. We had trumpet, flugelhorn, trombone, alto and tenor saxes as well as a Latin percussionist who overdubbed all the percussion parts live. I also recorded all the piano parts live.

Did Sega offer any feedback on your updated versions?
I had submitted my demos before I went to the studio to record with the musicians and they were signed off straightaway, so I didn't have to make any changes which was fantastic. I then proceeded to go ahead and record the musicians and deliver the final mixes. Both Sega and Sumo Digital were delighted with the results, so job done!

Reviewers have called your remixes the "definite versions" of the original tracks. How pleased were you with the end results?
That's a wonderful compliment to hear. I have to say that nothing beats the original arcade versions but I was very honoured to have worked on the remixes and I had great fun in doing so – which I think comes through in the music. A personal highlight for me was being able to perform a medley of these versions live at the Royal Festival Hall during a Video Games Live show. A fun fact to finish on. I also remixed and recorded a version of *Last Wave* [the game over music]. Although Sega hadn't requested this, I thought it was a great opportunity to work on this remix as well, since it's another great track from the original. Sega and Sumo loved this remix so included it in the game.

» These photos, from Richard's personal collection, show him and the musicians recording the remixes at Olympic Studios in London.

THE CAR'S THE STAR

THE FAMOUS FERRARIS THAT ARE INTEGRAL TO THE SERIES

TESTAROSSA
1984

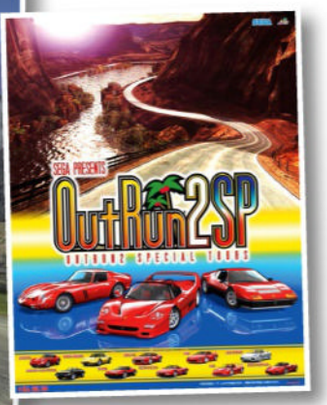
■ Ferrari's flagship Eighties car is perhaps its most famous model – and the one that Yu Suzuki chose for the starring role in his original *Out Run* (albeit without seeking a licence). The one in the game is a convertible variant which Ferrari never actually put into production.

F40
1987

■ On release this was Ferrari's fastest-ever model, with the manufacturer asserting it was the *world's* fastest sports car. As the most exciting new car on the block, it was chosen as a replacement for the Testarossa in *Turbo OutRun*, again without a licence secured.

"THE ARCADE HAD DOUBLE THE MEMORY OF THE XBOX, BUT THE XBOX HAD DOUBLE THE MEMORY OF THE PS2, SO THE PS2 VERSION HAD TO BE A QUARTER OF THE SIZE OF THE ARCADE"

PETE ELLACOTT



» *SP* introduced two new Ferraris, the 250 GTO and the 512 BB, flanking the F50 on the flyer here.

» [PC] Despite being 20 years old, the epic draw distance in the game still manages to impress.

that allowed the user to drive and drift, and from the available titles *Daytona USA 2* and *Scud Race* fit the bill. We still had to make modifications for these tracks to loop and some tweaks to fit the *OutRun 2* drifting model, but I think a lot of Sega fans appreciated these additions."

With all the new content added and a release date of October 2004 finalised, the team received a hand from Sega producer Nobuyuki Minato to help get the game over the finish line. "I remember Minato-san flying over to the UK," says Phil, "and almost living in the office for a couple of weeks as we finalised everything from car handling to challenge difficulties. He was a star."

The game hit its release date but the *OutRun 2* journey was only just beginning for Sumo. The next stop was a version for the Japanese Xbox which received extra levels of scrutiny from Sega, according to Phil. "For the EU and US versions we reduced a lot of trackside detail, but for the Japanese version all that geometry had to go back in, or be argued about tree by tree, bush by bush!" These changes are most evident in the bonus stages which look closer to the coin-op versions in the Japanese release.

» [PC] *OutRun 2006* features two alternative courses: Palm Beach at dusk, seen here, and Sandy Beach at night.

Sega was not done with *OutRun 2* either. While Sumo was busy working on the Xbox conversion, AM2 was prepping an enhanced version for arcades entitled *OutRun 2 SP* (*Special Tours*). This was no mere lick of paint however. *SP* introduced 15 brand-new stages, all set in the Americas, in addition to the original's 15 European stages. Numerous changes were made to the gameplay too, with the main ones being the ability to slipsteam other vehicles for a speed boost, and the introduction of Rivals – fellow Ferrari drivers who joined you on the journey, rather like the Porsche-driving dude from *Turbo OutRun*. *SP* also adopted another feature of *Turbo OutRun* in the reintroduction of the 15-stage continuous route which did away with the forks in the road. This extended race was available for both the *SP* and original courses, although the more devious operators could choose to up-charge you an extra credit to participate. The final nod to the past was the addition of the original soundtracks from both *Out Run* and *Turbo OutRun*.

Probably the biggest change to *SP* was that it was easier than the original. The new courses were not necessarily tamer, but crashes were more forgiving and drifting felt like it was more 'on rails' than before. To compensate for expert drivers, livelier 'tuned' versions of each car were added to Time Attack mode. Talking of cars, two new Ferraris joined the original eight – the 250 GTO and the 512 BB. Both of these cars had already appeared in the Xbox version of *OutRun 2*, but that was the only new feature the two games shared. Phil confirms, "I don't remember us seeing anything of *SP* while we were developing the Xbox version. We knew it was happening, but it didn't directly influence anything we did."

OutRun 2 SP debuted in arcades in December 2004 and sported a racing yellow colour scheme as opposed to the original's Ferrari red. It was available as a standard sit-down type and a deluxe version based around a replica of the 360 Spider (it was still static mind, hydraulic cab fans). As before, up to four units could be linked together.

Following its successful conversion of the original game, Sumo was invited to work its magic on *SP*. This time however it would not be exclusive to the Xbox and would also appear on the PS2, PSP and PC. Pete

F50
1995

■ Developed to celebrate Ferrari's 50th anniversary, the successor to the F40 actually evolved from the Testarossa, making it the perfect vehicle to headline *OutRun 2* in 2003. The car was playable in the original arcade game, alongside seven other licensed Ferrari models.

360 SPIDER
2000

■ The successor to the F355 (the car which inspired Sega to create *F355 Challenge*), in its convertible guise, was chosen as the cover star of the Xbox version of *OutRun 2*. Its default colour in the game was silver, but you could switch it to Ferrari red if preferred.

SUPERAMERICA
2005

■ Based on the Ferrari 575 Maranello, this convertible grand tourer was the ideal model to feature on the cover of *OutRun 2006*, thanks to its *Coast 2 Coast* subtitle. The car was available alongside 14 other Ferraris – the biggest selection in any *OutRun* game.

» [PC] The rivals evoke memories of Mr Porsche from *Turbo OutRun* – but at least they don't try and steal your girl while screaming, "Take a hike, pal!"

» [PC] Drifts can be initiated by tapping the brake or dropping a gear and then turning hard into the corner.

» [PC] Slipstreaming other vehicles reduces drag and gives you a welcome speed boost.

Ellacott programmed the PS2 version and he remembers the sizeable challenge this presented. "The arcade hardware had double the memory of the retail Xbox, but the Xbox had double the memory of the PS2, so the PS2 version had to be a quarter of the size of the arcade. The Xbox GPU was nearly twice the speed of the PS2 GPU too. The audio was also a lot of work, simulating all the crazy multi-voice engine samples. It used something like 32 different engine samples at different RPMs that we blended as you accelerated and changed gear. Oh and all the code comments were in Japanese."

"I recall we got kicked off an early online translation tool for using it too much to translate all the comments into English," chips in Steve. And then there was the version for the PSP handheld. "This required us to write a custom engine and do a lot of optimisation," reveals Phil. "We had gained a lot of experience working with the PSP on both *TOCA Race Driver* and *Virtua Tennis: World Tour*, so this helped a lot when it came to optimising the renderer to squeeze every last drop of performance out of the machine that we could." The PSP version ran at 30fps, half that of the other versions, but it was still an extraordinary achievement. The PS2 version meanwhile was admirably close to the Xbox release, while the PC version was able to output the game at HD resolutions.

The game arrived in March 2006 and was titled *OutRun 2006: Coast 2 Coast*. It was the most generous release yet, featuring all 30 stages, 28 music tracks and 15 Ferraris. Each car was also available in a supercharged 'OutRun' class. "We developed the different liveries and add-ons for the tuned cars, working directly with Sega and Ferrari on those," reveals Steve. "That was one of those special moments in game development where you're literally working directly with real Ferrari designers and engineers to collaborate on making something authentic to the brand."

The extras were unlocked by completing missions in the main *Coast 2 Coast* mode, which was like a hyperactive spin on the original Xbox version's Challenge mode. What was missing this time though were the celebrated bonus stages from other AM2 games and the original *Out Run* coin-op. Mitigating, Steve explains, "We needed to make three sets of every track, one for Xbox, one further reduced for PS2, then an even further reduced version for PSP. We also added in reverse versions of the tracks that needed to be completely reworked. By the time we'd done all that, additional tracks were just not possible in time. Same with the 1986 arcade version." Sumo was allowed more time to produce the Japanese PS2 version which was retitled *OutRun 2 SP*. The earlier extras were still absent, but some missing goal animations were restored and Clarissa's outfit was a little more revealing, plus various other fixes and optimisations were made.

> "UNFORTUNATELY THE FERRARI LICENCE PROBABLY LIMITS THE SCOPE FOR ANY FUTURE VERSIONS"
> **PHIL RANKIN**

Shortly after the release of *OutRun 2006*, the game returned to arcades one final time. *OutRun 2 SP SDX* (*Super Deluxe*) was the game fully evolved into its 8m-wide final form, featuring four two-seater Ferraris that now moved as you played (there was also a two-car *DX* version). Each car included a pair of controls, inviting two players to share driving duties. The actual game content was the same as *SP*, with the only difference being that it was running on Sega's new PC-based Lindbergh hardware which outputted at a higher resolution.

Consoles also received a more defined version in 2009 in the form of *OutRun Online Arcade*. Running at 1080p on Xbox 360 and PS3, the game looked better than ever – but

TRANS-EUROPE: THE ORIGINAL STAGES

HERE'S OUR STAGE-BY-STAGE BREAKDOWN OF THE EUROPEAN LEG

START

PALM BEACH

As in the original *Out Run*, your journey begins on a sun-kissed coast under brilliant blue skies. This course provides a gentle introduction to the game as you wind through the resort, with the only challenge being the tricky chicane before the split.

SECOND COLUMN - A

DEEP LAKE

This fast, generally flat course spans the lake on a series of four-lane bridges. None of the corners are taxing which means you can take them flat out without drifting, although precise positioning is required to navigate the final left-hander.

SECOND COLUMN- B

ALPINE

We're up in the Alps so you can expect stunning views as you race up and over the range. Two curved tunnels carve a route into the side of the mountain and the first one is slightly sneaky, so ease off to avoid hitting the tunnel wall on the exit.

THIRD COLUMN - A

CASTLE WALL

The stronghold is an impressive sight but there's no nice straight avenue leading up to it. Instead the route weaves through the structure, ducking under bridges and taking in a series of sweeping S-bends where drifting is mandatory.

THIRD COLUMN - B

CONIFEROUS FOREST

Your drive through the tree-covered uplands is a dangerous one. Low branches obscure your view and tricky turns line the route. Why this challenging course appears so early on is a mystery. As least it's in the middle so you can avoid it.

THIRD COLUMN - C

DESERT

Unlike the barren desert course of the original game, this one takes place at the Pyramids Of Giza, and indeed sees you navigating a demanding double S-bend around the Great Pyramid itself. We'll still take it over Coniferous Forest.

FOURTH COLUMN - A

CLOUDY HIGHLAND

An appropriate title for sure. Clouds reduce visibility as the road scrapes the sky before dipping majestically down into the valley below. Drifting is not really necessary until you negotiate the S-bend as you climb back out of the valley.

FOURTH COLUMN - B

INDUSTRIAL COMPLEX

This ugly sprawl seems like a million miles from the beautiful surroundings of Palm Beach. On the plus side it's perhaps the fastest course in the game, with plenty of wide straights and easy drifting corners to really open up on.

FOURTH COLUMN - C

SNOWY MOUNTAIN

The route twists its way through an icy gorge. It's generally fine until you pass under the viaduct, at which point it twists up and around the mountainside. Another one to avoid if you're looking for a fast time to the finish line.

FOURTH COLUMN - D

GHOST FOREST

Another forest stage, and this one looks rather foreboding at first thanks to its gloomy look, but it's not too tricky. It's best to ease off and drive most of the course, drifting only for the sharp right-hander and S-bend right at the end.

FINAL COLUMN - A

TULIP GARDEN

The windmills dotted around the landscape suggest we're in the Netherlands and it's the setting for a nice drive to the Goal A finish. Apart from an erratic mid-section and a nasty chicane near the finish, this is a pleasant end to your journey.

FINAL COLUMN - B

METROPOLIS

Who doesn't love Paris by night? The road snakes through the city, veering to the right around the Eiffel Tower before passing Notre-Dame and entering a fast underpass which takes you to the Arc De Triomphe and Goal B.

FINAL COLUMN - C

ANCIENT RUINS

Sandstorms obscure your view as you approach an arid Goal C. It starts tamely but the difficulty ramps up as the road narrows through the canyon. Then it's one big drift as you slide left and right and left again to the finish.

FINAL COLUMN - D

IMPERIAL AVENUE

When in Rome you'll want to perform an epic right-hand drift around the Colosseum and then race through the ancient capital on a surprisingly straightforward path to Goal D, ending in St Peter's Square in front of the Basilica.

FINAL COLUMN - E

CAPE WAY

We're in Greece for the last leg of the journey, touring quaint coastal villages. As you'd expect this is the most challenging final stage, thanks to the demanding S-bends which lead you up the hillside to the Goal E finish at the top.

TRANS-AMERICA: THE SPECIAL TOURS

EXPLORING THE SP COURSES, FROM COAST TO GLORIOUS COAST

START

SUNNY BEACH

■ Very similar to its counterpart Palm Beach, both in setting and how it eases you into the game. You don't need to drift, but the wide coastal route with its sweeping turns provides ample opportunity to test out some sideways action.

SECOND COLUMN - A

BAY AREA

■ The stage begins with you crossing the Golden Gate Bridge – the perfect place to slipstream – then swings into a tricky uphill S-bend. Then it's a fast dash down the city's steep hills before a wide left-right turn leads to the checkpoint.

SECOND COLUMN - B

NATIONAL PARK

■ We're in Yosemite for a breezy drive through a tree-lined valley. The first left-hander can be taken at full speed with careful positioning, but the two S-bends towards the end of the stage provide a good test for your drifting skills.

THIRD COLUMN - A

WATERFALLS

■ With the rumble of Niagara Falls in your ears, head down towards the river taking care with the un-signposted left-hander. Then it's a sharp right-hander by the bridge and a dart towards the tunnel which curves deviously to the right.

THIRD COLUMN - B

BIG FOREST

■ While it looks similar this is, thankfully, no Coniferous Forest. You can drive through most of the stage without drifting, until you pass through the hollowed-out tree when you'll need to drift through a tight left-right corner to the finish.

THIRD COLUMN - C

CANYON

■ The Grand Canyon naturally provides the setting for one of the most epic stages on your journey. It's no leisure drive though. Ease off as you power up the hill then get ready for the drop which leads to a tricky S-bend at the bottom.

FOURTH COLUMN - A

LOST CITY

■ The route takes us high up into the misty mountains and it really is breathtaking. You're allowed to take in the views too as it's a straightforward course with very little drifting required (you'll only need it for the final three turns).

FOURTH COLUMN - B

CASINO TOWN

■ Vegas baby! Keep your eyes peeled for *Sonic The Hedgehog* signage as you tear down the strip, taking on a series of 90-degree bends (the road is wide, which helps). The course then loops around, requiring an epically long drift.

FOURTH COLUMN - C

ICE SCAPE

■ We're once again in Snowy Mountain territory for one of the most challenging *SP* stages. A gentle uphill climb following the oil pipeline is bookended by two twisting sections which require skillful drifting to avoid wiping out.

FOURTH COLUMN - D

JUNGLE

■ This stage is on the hard route with good reason, as it snakes through a hazy rain forest on a road that is often lined with huge boulders. It's fine until you pass beneath the waterfall, then you're in S-bend city right to the end.

FINAL COLUMN - A

GIANT STATUES

■ Monolithic Moai statues stare on as you tour Easter Island on your way to Goal A. The road is five-lanes wide for the most part, making for an easy finish – just watch out for the final S-bend which has a sting in its tail.

FINAL COLUMN - B

LEGEND

■ Goal B lies on the other side of a Mayan city and you even get to race through an ancient temple (UNESCO be damned). This is the fastest, easiest end stage in *SP*, with the only testing element being the penultimate corner.

FINAL COLUMN - C

FLORAL VILLAGE

■ Green fields and rolling hills dominate the landscape on the route to Goal C. After drifting through the initial left-hander you can drive through the rest of the stage, until you reach the lake and encounter some dangerous bends.

FINAL COLUMN - D

MILKY WAY

■ Arrive at Goal D in time to see the Space Shuttle take off from Cape Canaveral. This stage is horrible, featuring many nasty bends flanked by yellow crash barriers that seem to invite you in. Master this and you've mastered the game!

FINAL COLUMN - E

SKYSCRAPERS

■ New York City welcomes you as you race over the Brooklyn Bridge, past the Empire State Building and end in front of the Statue Of Liberty. Some of the bends in the Midtown area are quite tricky, but otherwise this is a fun slide through the city.

» [PC] *Out Run* meets *Asteroids* in one of the Coast 2 Coast missions.

» [PC] In *SP* you can drive all 15 stages in sequence, on both the original and *SP* routes.

content-wise it was limited, featuring just the *SP* tracks and no extras. Steve reveals that Sumo's hands were tied as it was released as a digital download. "At the time we had to work within size limitations. Xbox Live Arcade games had to be able to be downloaded and installed onto memory units for players who didn't have a hard drive. That restricted the overall size of the game and so the choice was made to only include the *SP* tracks. We always had the intention to either do a version with the original tracks – or do them as DLC. But by that point we were pretty stacked with other projects."

Regardless, *OutRun Online Arcade* was a blast played in full HD, but it wouldn't last due to Sega losing the Ferrari licence. As a result it was removed from PSN in 2010 and XBLA in 2011, plus the PC version of *OutRun 2006* was dropped from Steam around the same time. "Unfortunately the Ferrari licence probably limits the scope for any future versions," says Phil, when asked about what's next for *OutRun 2*. "Having said that, I would bite your hand off to work on a remastered version. Someone make it happen, please." Steve adds, "I have tried and will continue to try to encourage someone to let us make another *OutRun* game. We are all big fans and we'd love to do another one day."

A new *OutRun 2* collection may well happen at some point, especially as Sega recently announced plans to leverage more of its iconic properties. And dare we dream about *OutRun 3*? But for now, thanks to Sumo's efforts, we can still enjoy *OutRun 2* at home.

» The four-player *OutRun 2 SP* deluxe is a massively popular attraction at Arcade Club's Bury venue.

» [PC] Can you overtake 98 rival racers over 15 stages? Coast 2 Coast mode lays down the challenge.

> "THE WORK BEING DONE BY FANS IS INCREDIBLE... IT SHOWS THE STRENGTH OF LOVE FOR THE GAMES"
> **STEVE LYCETT**

Both games can be played on the Xbox 360 via backwards compatibility (but alas, not the new Xboxes), and the PC version of *OutRun 2006* runs brilliantly on even the most basic setup. And for those with more modern PCs there's FXT, a remarkable mod by Howard Casto designed to enhance the PC version and make it as arcade accurate as possible. "The work being done by fans is incredible," says Steve. "I've been keeping an eye on community efforts to update the PC version to take advantage of modern hardware, restore some elements we couldn't include in time and support force-feedback wheels. Equally, you can now run the PSP version in VR via emulation – and look around as you play. I think it shows the strength of love for the games. And it shows there is a desire to see more."

Of course, for the true *OutRun 2* experience you need to play the coin-op and it remains a mainstay in many arcades (typically upgraded to the *SP* version). In specialist venues you may even find larger installations. The UK's Arcade Club has a four-player *SP* deluxe at its Bury location and a two-player *SP DX* (soon to be four-player *SP SDX*!) at Leeds. So there are still opportunities to play, enjoy and challenge others on the coin-op. "There's a good chance you'll find I've left a Time Attack high score if you use my preferred car the 512 BB in any arcades near Sheffield," says Steve, smiling. "I also used to have a record on the online leaderboards you could send scores to – 'til I mentioned that and a bunch of fans recorded better times to knock me out of the top ten!"

Twenty years on from its debut, *OutRun 2* and Sega's beautiful journey are still in arcades, in our homes, in our hands and in our hearts.

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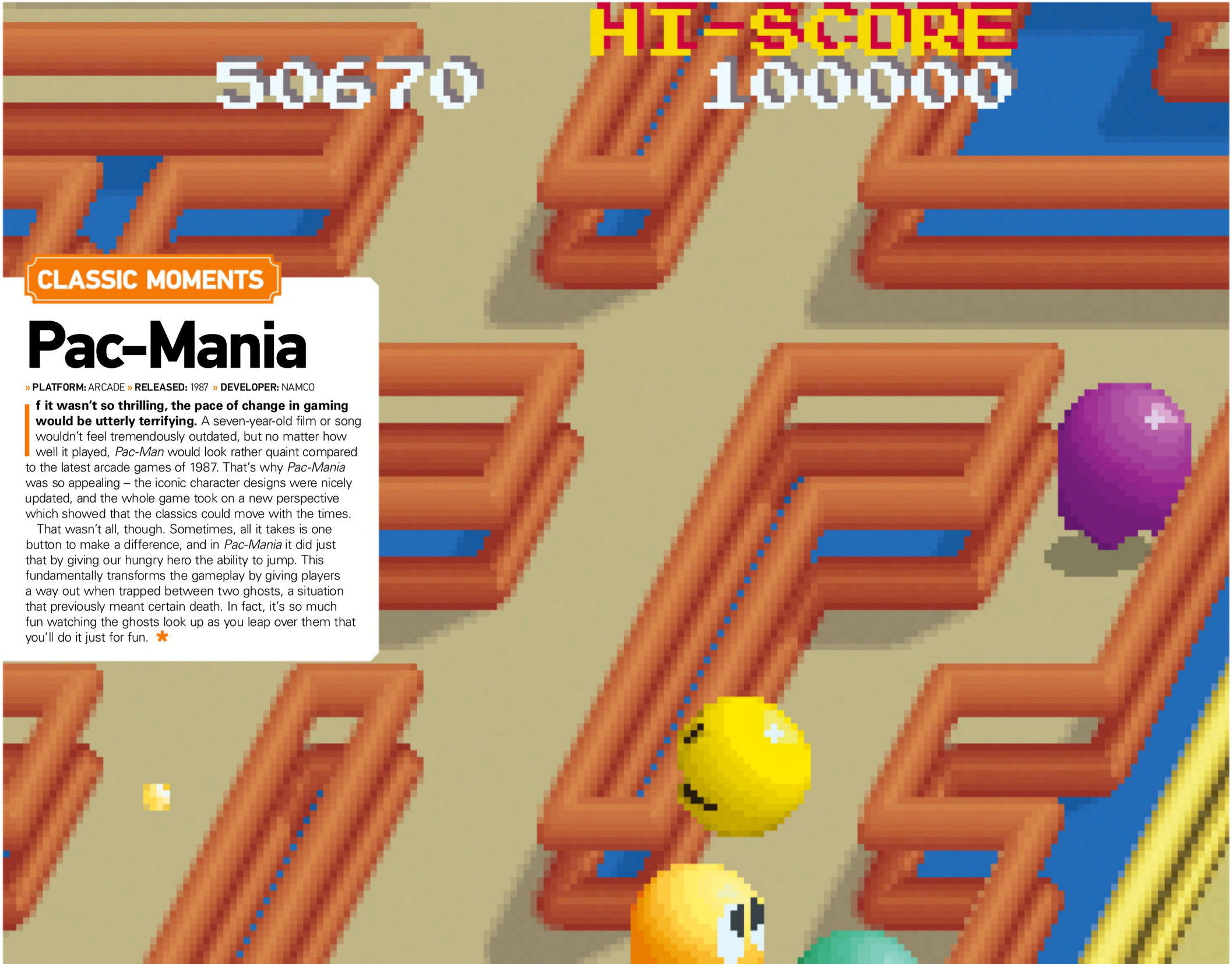


CLASSIC MOMENTS

Pac-Mania

» **PLATFORM:** ARCADE » **RELEASED:** 1987 » **DEVELOPER:** NAMCO

f it wasn't so thrilling, the pace of change in gaming would be utterly terrifying. A seven-year-old film or song wouldn't feel tremendously outdated, but no matter how well it played, *Pac-Man* would look rather quaint compared to the latest arcade games of 1987. That's why *Pac-Mania* was so appealing – the iconic character designs were nicely updated, and the whole game took on a new perspective which showed that the classics could move with the times.

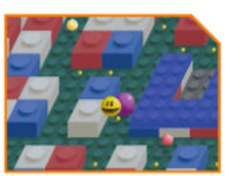
That wasn't all, though. Sometimes, all it takes is one button to make a difference, and in *Pac-Mania* it did just that by giving our hungry hero the ability to jump. This fundamentally transforms the gameplay by giving players a way out when trapped between two ghosts, a situation that previously meant certain death. In fact, it's so much fun watching the ghosts look up as you leap over them that you'll do it just for fun.

BIO

There's a timeless quality to *Pac-Man*'s core maze gameplay that has made it easy to update over the years, and Namco took advantage of that with *Pac-Mania*. The addition of a couple of extra power-ups and the ability to jump changed the gameplay, while extra detail and new stage themes brought the graphics up to modern standards. Arcade success led to plenty of conversions over the following five years, covering all major home-computer formats as well as the NES, Master System and Mega Drive.

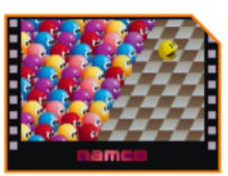
MORE CLASSIC PAC-MANIA MOMENTS

Popping Pellets



Pac-Mania introduces green and red Power Pills, new power-up items which spawn in the same place as bonus fruits. The green one will give Pac-Man a very useful speed boost for a limited time, while the red one doubles the point value of any ghosts that Pac-Man manages to eat.

Have A Break

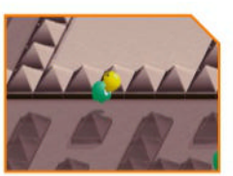


The intermission scenes were a fun little part of the original Pac-Man, and they're back here. These ones really highlight the sprite-shifting power of Namco's arcade hardware, showing masses of ghosts pursuing Pac-Man and even a gigantic ghost in one of the later scenes.

Big Bonus

Munching through baddies is always the way to a big score, and if you can rack up six in a row you'll get the special 7,650 point bonus. There's a significance to that number too, because in Japanese *goroawase* wordplay the number 765 can be represented as Namco.

Tables Turned



You can't have it all your own way, so after a few stages *Pac-Mania* gives the ghosts a boost by allowing them to jump too. They're slower than their grounded counterparts but will leap to meet Pac-Man, and while some can be jumped over, others will match his height.

ULTIMATE GUIDE

GHOSTBUSTERS

YOU MIGHT THINK SOMEONE TRYING TO BOLT THIS MOVIE LICENCE ONTO A CAR COMBAT GAME WOULDN'T HAVE A GHOST OF A CHANCE, BUT DAVID CRANE MADE IT WORK. WE LOOK BACK AT A GAME THAT, DESPITE THE ODDS, CAPTURED THE SPIRIT OF ITS SOURCE MATERIAL

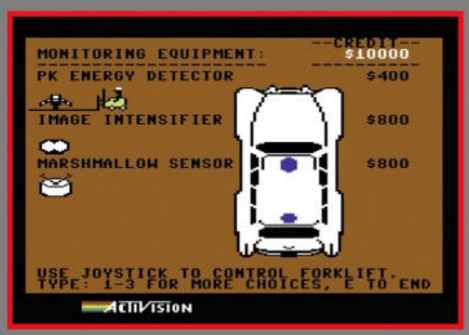
WORDS BY NICK THORPE

The great thing about *Ghostbusters* is that if you ask people about the film, they'll each highlight a different iconic aspect of it. The theme tune is obviously a classic, but people might also talk about the Stay-Puft Marshmallow Man, Slimer, the Ecto-1 car or the need not to cross the streams. For some reason though, Peter Venkman's brilliance as a businessman rarely comes up. Despite that, David Crane's take on *Ghostbusters* has strategic resource allocation at its core and has become one of the best-remembered film licences of its era.

That's actually pretty impressive – although it was based on one of the most-popular movies of its era, *Ghostbusters* wasn't exactly guaranteed an easy ride with players. It's truly amazing to think about how old some received gaming wisdom is, and suspicion of licensed games can be traced back to just a few years after they were introduced in the late-Seventies. After suffering through games like *ET: The Extra Terrestrial* on the Atari 2600, players quickly realised that big names can be used to sell some truly half-baked software.

The problem is that although movie licences can be commercially valuable, they often come with conditions that actively detract from the development process and *Ghostbusters* was definitely a great example of that. At a time when Activision would normally take nine months to make a game, the *Ghostbusters* deal left the team with just six weeks to create a game that would be able to capitalise on the hype generated by the film. Smartly realising that it wouldn't be possible to create a quality product from scratch in that time, David Crane decided that the Ecto-1 was one of the film's most interesting props and adapted his existing *Car Wars* concept to include it.

When the game begins, players are presented with a new *Ghostbusters* franchise, a big pile of cash and plenty of ways to spend it. You need to buy a car to get around the city, and then equip it for all of your ghost-grabbing needs – a hangover from the *Car Wars* concept of buying guns and missiles. Once you've got your containment devices, Ghost Vacuums and more, you'll be presented with a map of the city and plenty of reports of paranormal activity to attend to, so you'll need to set a course and make your way to ▶

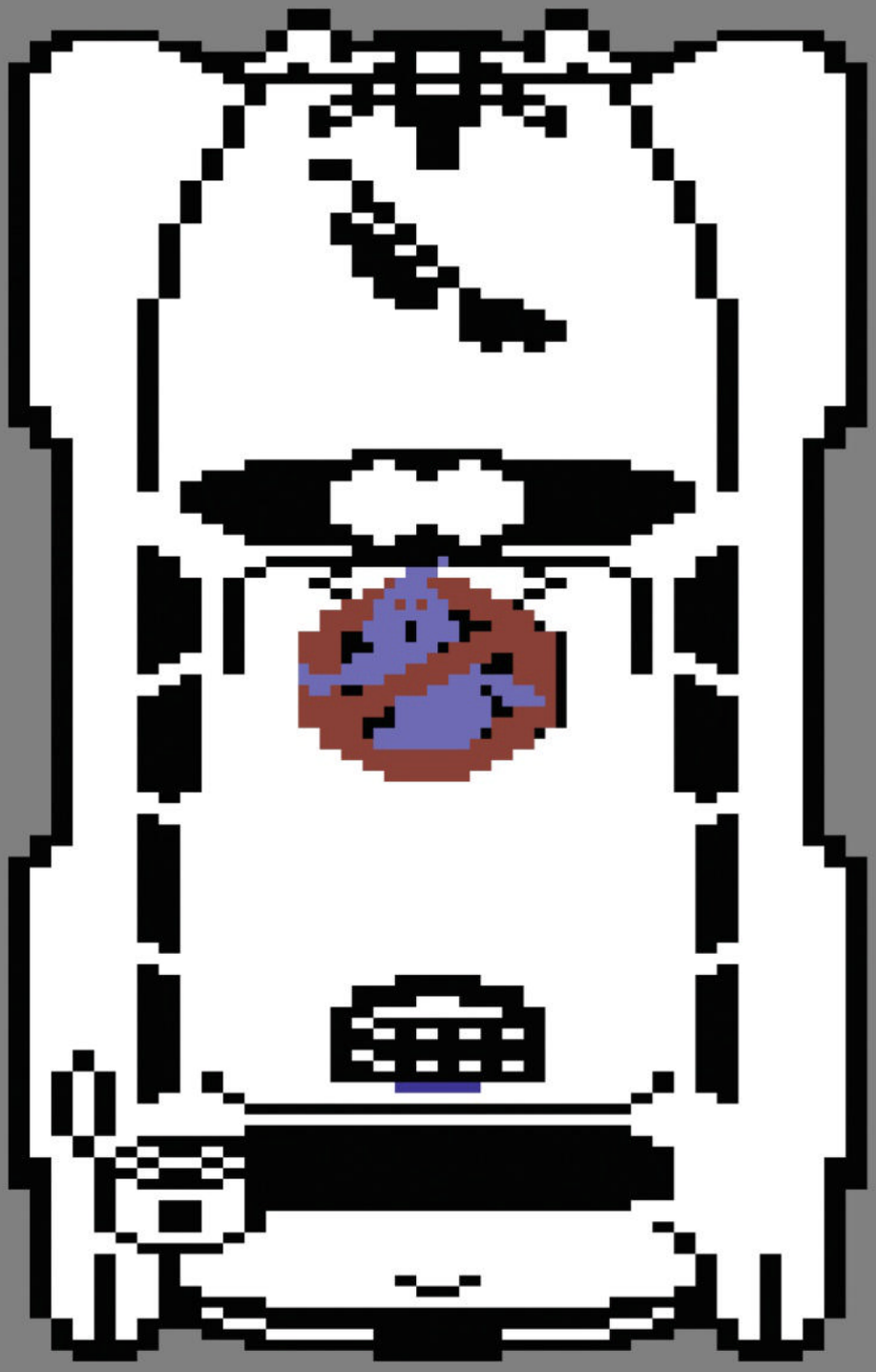


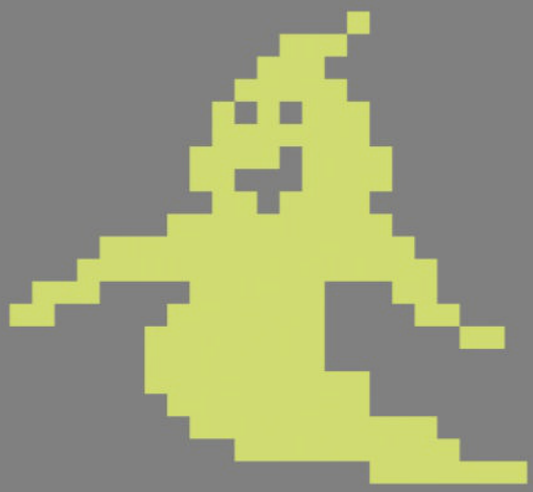
» [C64] Here's where you start out – picking and equipping your ghost-busting vehicle.

» [C64] Messing up gets you slimed, necessitating a trip back to Ghostbusters HQ.

» [C64] Here's a good example of the capture scene, with the ghost trapped between beams.

» [C64] The city map shows ghost-infested buildings in red, and you choose your own route.





Q&A: DAVID CRANE

NEED A LICENSED GAME IN A SHORT TIME FRAME? HERE'S THE MAN YOU CALL

How did the *Ghostbusters* project get started?
When [Activision vice president of product development] Tom Lopez determined that the *Ghostbusters* licence was available and that he could get it for a reasonable price, he came to the game design group. He told us, "This licence is available. To make financial sense we will have to make a game in six weeks (as opposed to the normal nine months). What can we do?" We all agreed that if we had to start a game from scratch we could not do a quality game in the necessary time frame.

What made the *Car Wars* design a good fit for *Ghostbusters*?
One of the coolest props from the movie was the hearse-turned-ghostmobile. I could picture how to wrap the theme of this new movie around my existing game, with the minimum amount of effort. I kept the top-view racing game and replaced the guns, missiles and rocket launchers with more appropriate weapons such as the Ghost Vacuum.

How do you feel about the shopping aspect of the game?
If the base game *Car Wars* hadn't contained a resource-allocation segment, there is no way that the *Ghostbusters* game would have featured it. That's great, because I like the way it works. But the harsh realities of development schedules have a major impact on game features. It always has and it always will.

What did you do to bring the game closer to the movie?
Midway through development, I decided it was important to add digitised speech to the game. Some of the trendiest things to come from the movie were sound bytes such as, "He slimed me" and the crowd chanting, "Ghostbusters!" I felt the sounds helped to capture the spirit of the movie (pun intended) so I decided to keep them in.

For David Crane's full story of creating *Ghostbusters*, look for our Making Of feature in issue 25.

SPOOKY SUBSTITUTES

BUSTING TO ARREST MORE APPARITIONS? GIVE THESE GHOSTBUSTERS GAMES A TRY

THE REAL GHOSTBUSTERS

ARCADE • 1987

This run-and-gun from Data East is based on the popular cartoon series rather than the movie, and it's a rather simple affair – run up the screen, zap the ghosts, grab power-ups and try not to die. It's not too bad and is certainly more enjoyable with a second player, but the home-computer versions weren't very popular.

GHOSTBUSTERS

MEGA DRIVE • 1990

If you don't gel with David Crane's version of *Ghostbusters*, this platform game might be more to your taste. It's not quite a classic but it's a pretty good game, even though the sprites are oddly large-headed and Winston is nowhere to be found. Fortunately, the missing Ghostbuster was added to a ROM hack earlier this year.

EXTREME GHOSTBUSTERS: THE ULTIMATE INVASION

PLAYSTATION • 2004

As an extremely late PAL exclusive, this lightgun game managed to escape the attention of practically everybody when it launched. That's a shame, because while it's certainly no *Time Crisis*, this cartoon adaptation is more solid than you'd expect for such a low-profile release.

GHOSTBUSTERS: THE VIDEO GAME

VARIOUS • 2009

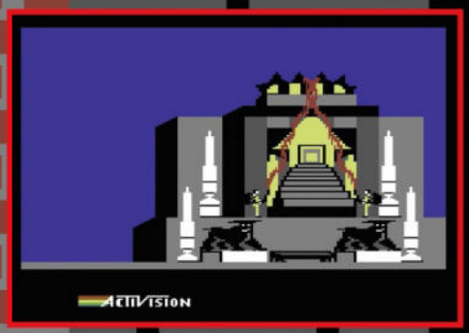
This big-budget production features many of the original movie cast and has been described by Dan Aykroyd as, "Essentially the third movie." Although frequently criticised for being too short, this received broadly positive reviews on most platforms, with the PSP being a notable exception. It's also available on contemporary systems.

GHOSTBUSTERS: SPIRITS UNLEASHED

VARIOUS • 2022

This multiplayer first-person shooter by IllFonic pits a team of four Ghostbusters against a single player who takes the side of the ghosts. Reviews were mildly positive, with the main criticism being that the game becomes stale due to a lack of content and gameplay options. It remains an interesting curio.

» [C64] When you're driving, you'll need to get near ghosts to hoover them up.



» [C64] The streams are crossed and Gozer is sealed away. Congratulations, you've beaten the game!

» [C64] Oh no – the Stay-Puft Marshmallow Man has flattened a building. You're footing the bill.

a building of your choice. You can choose a direct route, but it's best to take diversions to stop stray ghosts known as Roamers from reaching the Zuul building.

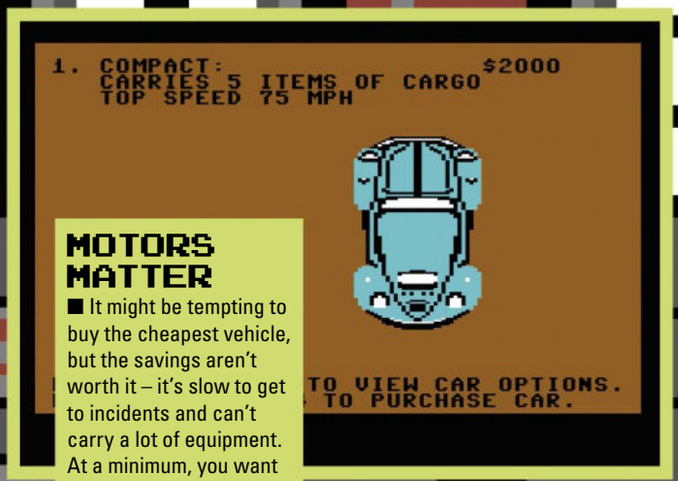
The journey plays out as an overhead driving sequence, in which you can use a Ghost Vacuum to capture Roamers before arriving at your destination. Once you're there, you'll be presented with a side-on screen in which you need to direct two members of your team to capture ghosts by using proton beams – which once again, must not be crossed – to herd them towards the traps. Catching ghosts keeps the city's psychokinetic (PK) energy level down and earns you more money, which you can spend on more equipment if you drive to the shop. You'll regularly need to return to headquarters to empty your Ghost Traps, and eventually you'll have to deal with attacks from the Marshmallow Man, who can level entire city blocks if not stopped with some timely Ghost Bait.

Although you can slow the rising PK energy level of the city, you can't stop it and once it hits its maximum level the Gatekeeper and the Keymaster will join forces. The goal of the game is to keep them from doing so for long enough to recoup your initial investment and end up with at least as much money as you started with – and if you manage that, you'll be able to attempt the final challenge, in which you need to sneak at least two of your team past the Marshmallow Man and into Zuul's temple. That's where the game ends under the original design, though later versions add extra action sequences after this point.

Ghostbusters' strategy comes down to balancing your initial spending with your money-making capability. If you buy a better car, you'll be able to carry more equipment and move around the city more quickly, but you'll also need to catch more ghosts to reach the end of the game. Do you load up on traps to prevent unprofitable journeys to HQ? Do you grab an Image Intensifier to make Slimers easier to catch, or a PK Energy Detector to get

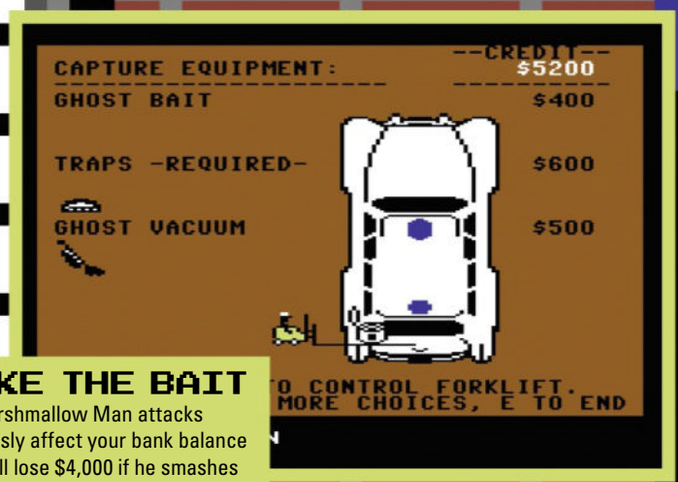
BUSTING BUSINESS TIPS

SOME ADVICE TO MAKE A SUCCESS OF YOUR NEW FRANCHISE



MOTORS MATTER

■ It might be tempting to buy the cheapest vehicle, but the savings aren't worth it – it's slow to get to incidents and can't carry a lot of equipment. At a minimum, you want to purchase the hearse.

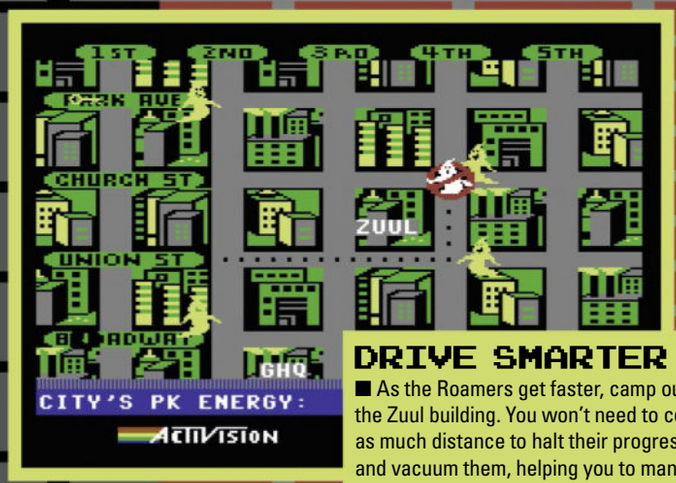


TAKE THE BAIT

■ Marshmallow Man attacks seriously affect your bank balance – you'll lose $4,000 if he smashes a building but successfully baiting him earns you $2,000, so make sure you always have some.

TOP TRAPPING

■ It's best to place your trap as high up the screen as possible when catching ghosts. It's best to activate the beams when a ghost approaches your 'buster and flies lower on the screen.

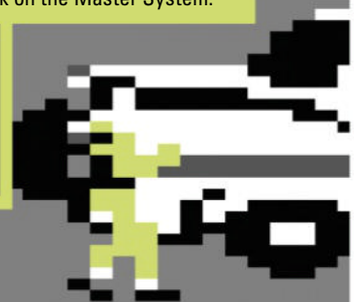


DRIVE SMARTER

■ As the Roamers get faster, camp out by the Zuul building. You won't need to cover as much distance to halt their progress and vacuum them, helping you to manage the city's PK level more effectively.

MARSHMALLOW MADNESS

■ Getting past the Marshmallow Man depends on the version you're playing. In most versions, you must go through his legs, but that won't work on the Master System.



early warnings about buildings that are going to be attacked by ghosts? It's all up to you, and it makes for a compelling game. Beating *Ghostbusters* allows you start again with an account number, carrying forward money you've earned so that you can start with a better vehicle and equipment.

Of course, all of that would be for nothing if the game didn't carry the atmosphere of the film. Despite the short development time requiring an unrelated idea to be adapted into a *Ghostbusters* game, there was no shortage of effort put into ▶

CONVERSION CAPERS

HOW DO THE OTHER VERSIONS FARE AGAINST THE C64 ORIGINAL?

ATARI 8-BIT

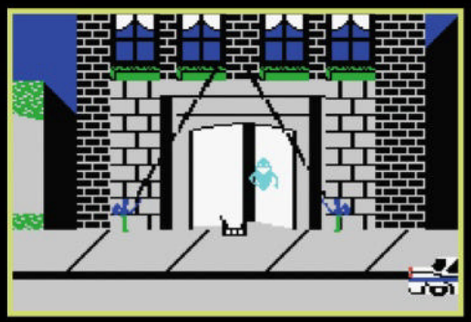
Ghostbusters hit Atari's home computers in style. The graphics hold up well and are particularly nice in the driving sections, and the Marshmallow Man sprite is enormous if a little simple. The POKEY rendition of the theme music isn't bad at all and the speech samples sound very good.

ZX SPECTRUM

Although it somehow retains the speech effects, the original 48K version of *Ghostbusters* isn't too hot. An updated 128K version adds more colour and keeps the improved music playing throughout the game, and that's the one to go for even though the Marshmallow Man is still inexplicably tiny.

AMSTRAD CPC

This version is no lazy Spectrum port, but the nicest thing you can say is that the theme tune is pretty decent. The graphics are colourful but basic, the voice clips aren't very clear at all, the driving sections are not tremendously smooth and the whole thing just feels slower than other versions.



MSX

Although it lacks the voice clips of the C64 version, this is a rather nice port – it's nice and colourful, features very smooth driving sections and a suitably large Marshmallow Man, as well as a good rendition of the theme tune. This version is available on both tape and cartridge.

APPLE II

This version loses a lot of the atmosphere of the others as the theme music doesn't play during the game – though hearing it on the title screen, that's probably for the best. It's not too bad otherwise, though the Marshmallow Man weirdly only jumps up and down rather than from side to side.

PCJR

This is one of the less-recognised versions of the game and one that isn't particularly common, but it's actually pretty good. The graphics aren't tremendously colourful, but the driving sections are nice and smooth and the music is okay, though the voices are absent.

ATARI 2600

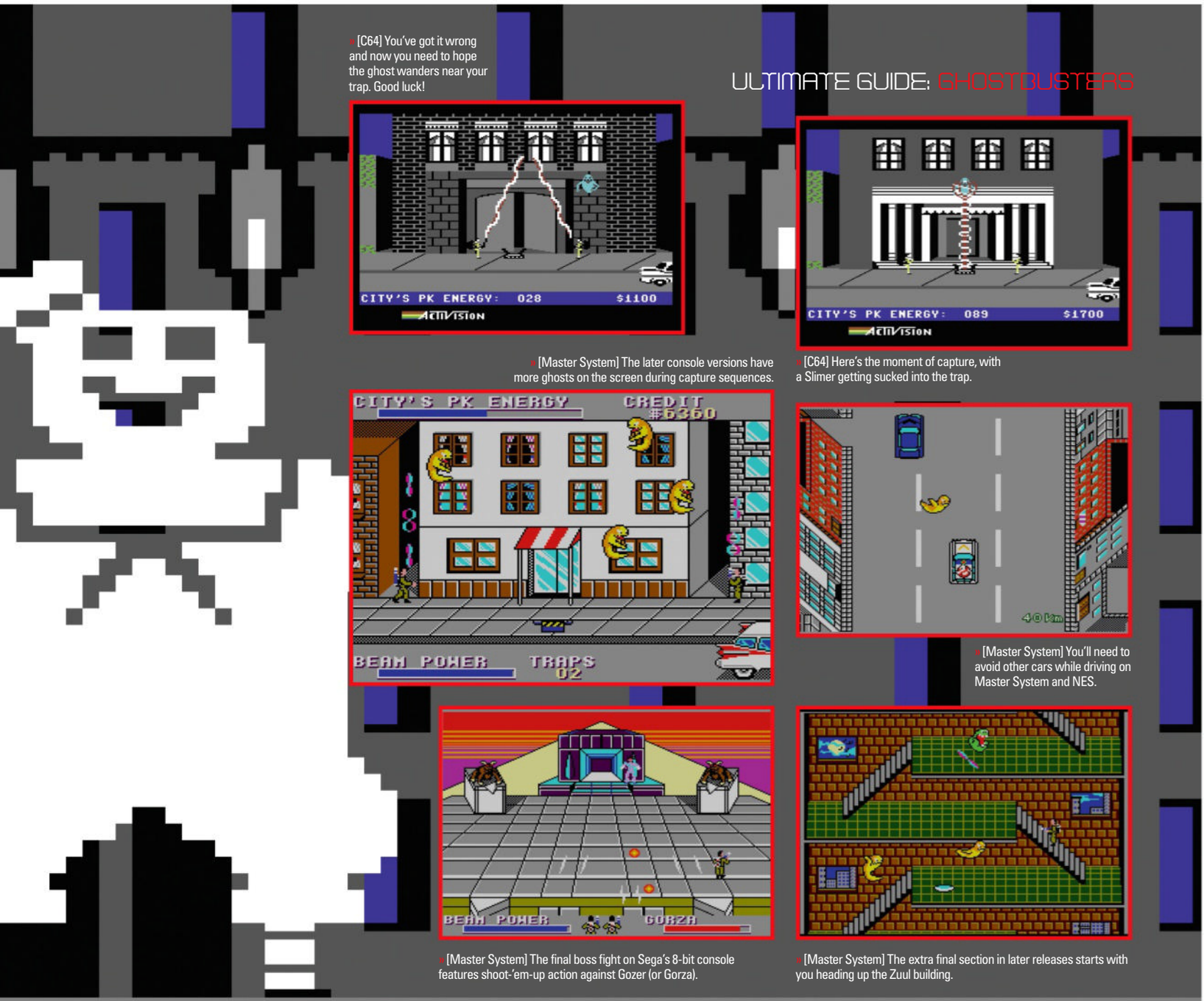
This is an ambitious and impressive conversion that includes almost every aspect of the original design. Unfortunately, some simplifications were inevitable and the lack of a keyboard causes control issues, requiring players to use the console's difficulty switches to drop Ghost Bait.

NES

This version of the game includes more-involved driving sections with other cars and a fuel gauge, as well as a different endgame in which you have to reach the roof of the Zuul building and actually fight Gozer. Unfortunately, it's poorly programmed and the tower climb is far too hard.

MASTER SYSTEM

This is arguably the definitive version. Apart from nice graphics, it has vastly better implementation of the extra NES concepts while restoring aspects that version dropped, such as the need to evade the Marshmallow Man when entering the Zuul building. It's only really missing the voice clips.



[C64] You've got it wrong and now you need to hope the ghost wanders near your trap. Good luck!

[C64] Here's the moment of capture, with a Slimer getting sucked into the trap.

[Master System] The later console versions have more ghosts on the screen during capture sequences.

[Master System] You'll need to avoid other cars while driving on Master System and NES.

[Master System] The final boss fight on Sega's 8-bit console features shoot-'em-up action against Gozer (or Gorza).

[Master System] The extra final section in later releases starts with you heading up the Zuul building.

capturing it – a fact that's apparent as soon as the game starts thanks to an excellent SID rendition of the *Ghostbusters* theme, complete with a karaoke-style display of the lyrics. The, "Ghostbusters!" and, "He slimed me!" voice clips didn't just help the atmosphere but were technically very impressive, and sprites including your car sprite and the Marshmallow Man are large and very recognisable.

The Commodore 64 version of *Ghostbusters* was the lead version, and initially released in October 1984 in North America, and actually arrived before the film in the UK. It received some glowing reviews – *Computer And Video Games* described the game as "the best I've ever played on a micro" and awarded it 9/10 for playability, though the reviewer did feel that it may be confusing to those who hadn't seen the film. *Commodore User* noted that the licence was no guarantee of quality but gave the game a near-perfect set of scores, commenting on the "true American tradition" of the game's money-making goal. *Your Commodore* awarded it 4/5, saying that it was "a lot of fun, and impressively programmed", and *Commodore Horizons* gave it 7/10 for gameplay, describing the "astounding musical score" as the most enjoyable aspect of the game.

G*hostbusters* also made its way to a variety of home computers and the Atari 2600 and was a sales hit, topping the UK charts for the first three months of 1985. The enduring popularity of the film ensured that the game stayed viable for years – NES and Master System versions were released in 1986 and 1987 respectively, and former Mastertronic financial controller Anthony Guter has claimed that the home-computer versions sold 450,000 copies when reissued on the publisher's Ricochet label in 1988.

When dealing with a film licence like *Ghostbusters*, it could be tempting to take the conventional approach and just make a platform game – indeed, that's what happened on the Mega Drive. But David Crane's game stands as a reminder that with a bit of creative thinking and a liberal helping of the movie's iconography, it's possible to turn a seemingly unlikely game design into a genuinely beloved adaptation. Now, if you'll excuse us, we're off to go and lay some Ghost Bait – you can never be too careful, after all.

Mayhem In Monsterland

PLAYING THE LONG GAME

» COMMODORE 64 » 1993
» APEX COMPUTER PRODUCTIONS

It's a well-known fact that if you can hold on until the end of a console or computer's death throes you're likely to see some seriously impressive stuff from it. It makes sense after all because loyal developers to those machines will understand just what makes them tick and will be able to coax all sorts of magic out of them – just look at today's homebrew scene if you needed further proof.

Mayhem In Monsterland arrived on the C64 in 1993, an astonishing 11 years after the acclaimed machine made its debut. I wasn't there for the cute dino's arrival as I'd long moved onto consoles (the Saturn and PlayStation were just around the corner) but thanks to playing it more recently, I can fully understand why *Mayhem* was such a big deal at the time.

Even today *Mayhem* looks fantastic, with colourful visuals, gorgeous sprite design and large enemies that wouldn't have looked out of place on a Master System or NES game. If you'd been a staunch defender of Commodore's machine and had refused (or been unable) to move on to the flashier consoles or 16-bit computers, the Rowlands brothers' game was your reward. And what a reward.

Even today, *Mayhem*'s appeal is instantly obvious, it not only looks like an 8-bit console game, but also plays like one too with tight, responsive controls, solid collision detection and impressively smooth scrolling. Mayhem himself is a delight to control and it's great fun using his abilities to take down enemies and generally navigate the beautiful pastel-coloured levels.

Perhaps best of all, a collaboration between the Rowlands, Psytronic Software and numerous homebrew coders, including the late Jason Kelk, means that Mayhem's adventure is still available to enjoy today at a very reasonable price. So if you missed *Mayhem In Monsterland* like I did because you'd moved on from Commodore's machine, it's still relatively easy to find out what all the deserved fuss was about. ✱

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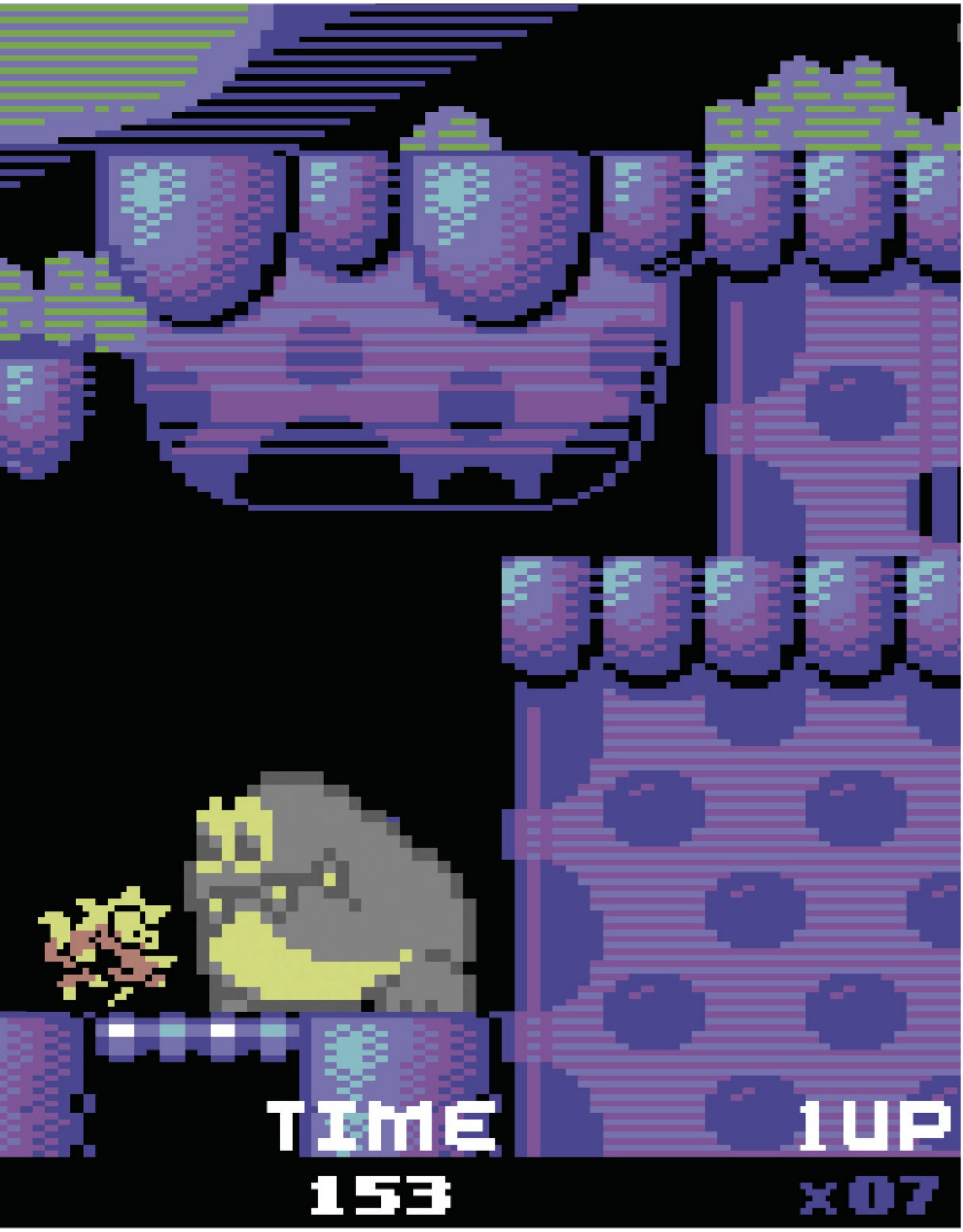
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THE MAKING OF

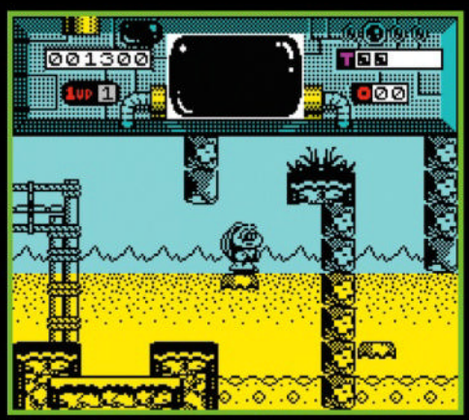
TURBO THE TORTOISE

TURBO THE TORTOISE RACED ON TO THE THREE MOST POPULAR 8-BITS JUST AS THEY WERE REACHING THE FINISHING LINE. SO, TO MAKE THIS BUDGET RELEASE MORE ATTRACTIVE, THE DEVELOPERS DECIDED TO GIVE PLAYERS A TASTE OF GAMING ON CONSOLES

WORDS BY DAVID CROOKES

Turbo was a different breed of tortoise. You'd catch him speeding across a series of platforms and bouncing on the heads of enemies one minute, then avoiding spikes, discovering hidden rooms and collecting an abundance of fruit the next. Not bad for a reptile with a reputation for living life in the slow lane and such platforming fun ensured that, when Hi-Tec released *Turbo The Tortoise* in 1992, the game sped to gamers' hearts.

Turbo ticked familiar boxes. Cute character: check; get from A to B: check; difficult boss: check. But it did it so very well, producing a game inspired by console titles that, from time to time, had neat ideas, such as being able to zoom around on a jetpack, create ad-hoc platforms by chucking rocks or accessing hidden rooms.



» [ZX Spectrum] As well as collapsible walls, fake dividers and blocks which sank, there were moving platforms to help Turbo get around.

"The initial concept and idea for *Turbo The Tortoise* was mine," says Dennis Mulliner, the game's designer who had previously worked on a handful of games including a *Rambo* spoof called *Butch – Hard Guy* in 1987 with programmer Dave Thompson. "I was working in computer retail which is where I met Dave Thompson who worked for R&S Distribution selling games to stores. We became great friends and started to design and write computer games together for the Spectrum."

While Dennis continued to work in retail, Dave went on to develop *Daley Thompson's Olympic Challenge* for Ocean Software and he worked for Hi-Tec Software, which built a reputation for creating budget games based on cartoon franchises by Hanna-Barbera and Looney Tunes. By 1992, he'd decided to go into business himself with a new development company, Visual Impact.

"I'd learned a great deal about the end-to-end delivery of games from working in-house at Hi-Tec," Dave says. "It was a small publisher so you got to see the development operation and how publishing worked – everything from designing the cover artwork to tape duplication." Dave and Dennis began working together again and *Turbo The Tortoise* became the new studio's first game.

At the time, gaming on home computers – especially on the 8-bits – was being overshadowed by the rise of the consoles, and developers were being influenced by titles coming out of Japan. "The look and feel of *Turbo* was driven by Sega having *Sonic* and Nintendo having *Mario* so our idea was to bring that type of platform gameplay to the 8-bit home computers through a new character, albeit in a much smaller scale," Dennis explains. "We wanted to bring a console feel to the 8-bits."

» [Amstrad CPC] The bosses – like this Terminator-looking character from the future – were tricky to beat.

Mario had the greatest influence. "We were all massive *Mario* fans, more so than *Sonic*, to be honest, and we wanted home-computer players to be able to experience some of the Nintendo magic," Dave says. "Shigeru Miyamoto's games were a huge influence for the team although *Manic*

» [Amstrad CPC] The bonus stages were very easy to complete but finding them was still a thrill.

IN THE KNOW

- **PUBLISHER:** HI-TEC SOFTWARE/ CODEMASTERS
- **DEVELOPER:** VISUAL IMPACT
- **RELEASED:** 1992
- **PLATFORM:** ZX SPECTRUM, AMSTRAD CPC, COMMODORE 64
- **GENRE:** PLATFORMER

Miner and *Monty Mole* also taught us lots about level design and how to craft addictive gameplay."

Dave coded the Spectrum and Amstrad versions of *Turbo The Tortoise* in his home office in Stoke. Craig Kelsall was by his side porting the game to the Commodore 64. Dennis and an artist called Jarrod Bentley worked on the design and graphics from their own homes. "They still had day jobs so they created the art in the evenings," Dave explains. "We'd meet every few days to get the latest art drop, spend time playing the game and come up with what to do next. It was very indie."

Dennis devised a wacky plot which involved a tortoise possessing incredible powers after being accidentally zapped during a cybernetic experiment. He also decided to spread the game over different time periods (prehistoric, the ice age, Egyptian period, mediaeval, the 20th century and the future), introducing a time-travel element. As such, the game had time-specific enemies such as pterodactyls, snow creatures and missile-spitting Sphinxes amid power-ups, weapons and collectables such as lives and extra ammo.

» Dave Thompson coded the Amstrad and Spectrum versions of *Turbo The Tortoise*.

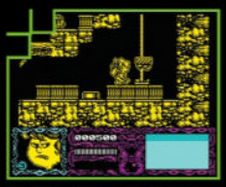
» The concept for *Turbo The Tortoise* was dreamt up by Dennis Mulliner.

» Jarrod Bentley was just 22 years old when he started work on *Turbo The Tortoise*.

» [C64] Each level was themed so, while the mechanics remained the same, each stage felt different.

Jarrod, who was aged 22 at the time, ensured each level background looked like it belonged in each time period. "Rocky and barren for the prehistoric age, plenty of snow, fir trees and icicles for the ice age and so on," he says. "I was still developing my 'style' at the time and I remember looking at Master System, Game Gear and NES games for inspiration. I was happy if I could draw something in-keeping with the style of graphics on those consoles."

After Jarrod was given a brief outline of what the game was about, he scribbled ▶



DEVELOPER HIGHLIGHTS

POTSWORTH & CO (PICTURED)
SYSTEM: ZX SPECTRUM, VARIOUS
YEAR: 1992

CRYSTAL KINGDOM DIZZY
SYSTEM: ZX SPECTRUM, VARIOUS
YEAR: 1992

SANXION
SYSTEM: ZX SPECTRUM, COMMODORE 64
YEAR: 1986

"I'D LEARNED A GREAT DEAL ABOUT THE END-TO-END DELIVERY OF GAMES FROM WORKING IN-HOUSE AT HI-TEC"
DAVE THOMPSON

CONVERSION CAPERS

WHICH VERSIONS WERE WORTH SHELLING OUT FOR?

ZX SPECTRUM

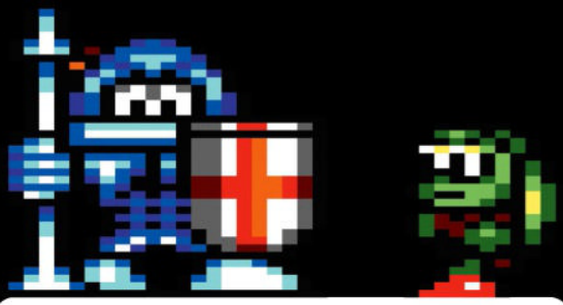
As you'd expect, the Speccy version is the least colourful of the three versions but detailed backgrounds, smooth parallax scrolling and clearly drawn sprites more than make up for that. The game progresses at a perfect pace – neither too fast nor too slow – allowing players to tackle enemies, navigate platforms, puzzles and battle bosses without feeling frustrated or overwhelmed. The big let down is a lack of music, an issue suffered by the CPC version too.

AMSTRAD CPC

The CPC version is, by far, the most colourful of the three and that really helps to distinguish the six time zones which make up the game. There's a real cartoon-like feel to both Turbo and the enemy characters and, while they can all appear a tad blocky at times, there's no faulting the animation. Although this version doesn't have parallax scrolling, such an omission doesn't really take much away from the game. It's as tricky and satisfyingly challenging as the others.

C64

Craig Kelsall coded the C64 version and while it's faithful to the other two programmed by Dave Thompson, the overall feel here is more akin to a console game. Although the graphics aren't quite as colourful and detailed as they are on the Amstrad and Spectrum, respectively, Turbo moves more quickly, the parallax scrolling lends a greater sense of depth and it also feels slightly easier to play. That said, the bosses are still tricky to beat.



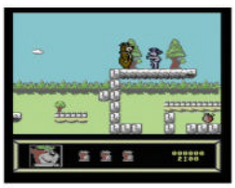
FRANCHISED FROLICS

MORE HI-TEC GAMES WITH CUTE CHARACTERS

WACKY RACES

Starring Dick Dastardly and Muttley, *Wacky Races* was a side-scrolling driving game/platformer which had you racing across five progressively tougher tracks knocking your rivals and obstacles out of the way while performing some heart-in-mouth leaps. Finish well and you'd go on a collecting spree.

YOGI'S GREAT ESCAPE



Yogi was smarter than the average bear and he'd know better than to judge a game on its cutesy graphics alone. In this instance, however, he'd have enjoyed a great-looking platformer and had bags of fun escaping Jellystone Park, collecting items and tackling a heap of nasties.

SCOOBY-DOO AND SCRAPPY-DOO

This magnificent game was arguably the best of the cartoon offerings published by Hi-Tec, standing up well against many full-price platformers. It married top-quality presentation with highly addictive gameplay that saw Scrappy battling enemies, finding hidden rooms, gathering power-ups and discovering stacks of Scooby Snacks.

HONG KONG PHOOEY: NO 1 SUPER GUY

Based on the Hanna-Barbera cartoon which first aired in the mid-Seventies, this game (by nature of the main character being a crime-fighting canine well versed in Chinese martial arts) could have been a superb beat-'em-up. Disappointingly, it proved to be a flawed, repetitive, jerky jaunt instead.

QUICK DRAW MCGRAW

This was a curious choice for a game given the cartoons were originally broadcast 31 years earlier! But the idea was an instant grab – asking gamers to battle enemies on top of a moving train, with some first-person *Operation Wolf*-like shooting to break things up.

▶ down some ideas and began to draw. "I did the backgrounds for the Commodore 64 first, then recoloured them for the CPC," Jarrod explains. "For the Spectrum, I took the C64 graphics, removed the mid-level colour and popped the tile over a chequered stipple effect to produce the monochrome graphics."

While this was being done, Dave worked on the mechanics of the gameplay. "Once we had decided how the player controlled Turbo and his moves, we could decide how he could beat the enemies and end bosses," Dennis explains. "Dave was an excellent programmer and he had to rein me in on many occasions with the grandiose ideas I had for games."

A decision made at the start was to ensure the game scrolled. "We were keen to move away from the single-screen platformer formula and introduce sideways scrolling which added an extra dimension," Dave explains. Jarrod wanted Dave to enable a colour scroll on the ZX Spectrum. "I tried – OK, I asked briefly – and he instantly said no," Jarrod laughs. "The engine was based on *Scooby-Doo And Scrappy-Doo* and, with the time constraints, it wasn't going to happen."

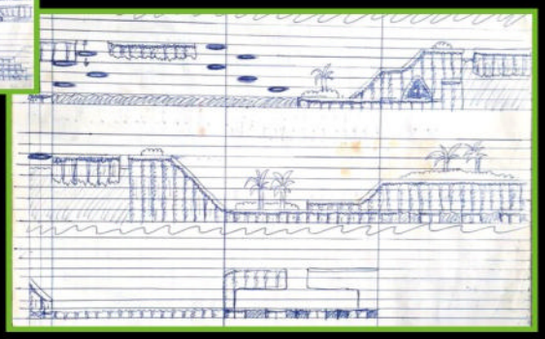
Getting smooth sideways scrolling was no easy task. Dave explains that the game's maps were built from tiles made up of 16x16 pixels and each level was about 256 tiles long. "On the Spectrum, you could only move things on character boundaries – that

» [Amstrad CPC] The rocks could also be picked up and lobbed which was ideal for forming a new platform to leap on to.

» [Amstrad CPC] These bouncy springs were great for reaching high places and they could be carried elsewhere.

» [Amstrad CPC] To find the bonus stages, you needed to look out for a little quirk in the background – push down on this divot and you're in.

» Jarrod Bentley sketched the backgrounds for each level on sheets of A4.



> "FITTING ANYTHING INTO THE SPECTRUM WAS ALWAYS CHALLENGING, USING EVERY LAST BYTE OF MEMORY"
> **DAVE THOMPSON**

is, every eight pixels – which would be way too fast and jerky," he continues. "So let me explain what the system did."

The first step, he says, required generating the 'smooth' scrolling blocks. "Imagine tile A and B next to each other, which would be 32 pixels wide but your canvas size was just 16 pixels," Dave explains. "If you scroll both blocks together two pixels at a time through the canvas, you can basically generate new blocks. You need to do this for two, four and six-pixel intervals.

"The Spectrum can only position things on character boundaries – that is, every eight pixels. By displaying each new block in turn, you can create the illusion of smooth scrolling. Once the fourth block has been displayed, you move everything eight pixels and repeat. There was a limitation that you could only create 48 new blocks at any one time so you had to be clever with how you designed the levels. What the system did, in real time, was to create new tiles that scrolled two pixels at a time."

The process pushed the Speccy. "Fitting anything into the Spectrum was always challenging, using every last byte of memory," Dave says. To make development easier, the maps were developed on the Atari ST and converted into a format that could be used on the 8-bits. "We used Atari STs to design the levels – I think it was OCP Art Studio – and the maps would be converted into a format that we could use in the games," says Dave. "We also used a customised version of Melbourne Draw, a basic bitmap-based art package, that would allow Dennis to create sprites and animate them so he could see how they would look in-game."

Since the levels were large and detailed, the game had to be a multi-load. "If it had been a single load then a distinct style for each level would have been really difficult," Jarrod says. "There would have been a single tile set so a lot of the graphics would have had to be shared across the different levels, not leaving much scope for design. The main task was keeping each tile set in roughly the same order. The first tile had to be a blank tile, followed by parallax tiles, then solid tiles, then pass-through tiles, platform tiles and so on."

Eventually, the game began to come together well. The plan was to follow Miyamoto in using basic building blocks and hazards that would be introduced without risk at first only to become more perilous on subsequent encounters. "I spent a lot of time tuning the levels because I never wanted the player to blame the game if they lost," says Dave. "It had to be their mistake – if a player persevered, they could learn, get better and win."

This approach became evident within the game which got progressively more difficult: the boss battles were especially hard, "But it was a familiar mechanic," Dave says. The game ended up being released by Hi-Tec but the company went bust soon after so only a few copies made it to the shops. Codemasters snapped it up, however. "We were lucky," Dave adds. "We hadn't been paid so we would have been in a bad spot had it not worked out."

Interestingly, there were plans for a sequel to the team's debut game. "One of the follow-ups that was discussed was a simultaneous two-player version though I don't believe we ever came up with a sidekick for Turbo," Dennis says. They never came to fruition but, one thing's for sure, *Turbo* was well-reviewed and received, something that pleased Dave. "For us, it was all about the gameplay and creating an engaging experience that you wanted to play just one more time."

» [C64] Collecting some items would gain you a whopping 250 points – a just reward for dealing with the game's many nasties.

TURBO BOOST!

THE TORTOISE HAS COME BACK OUT OF ITS SHELL WITH A NEW, UPDATED VERSION

■ In 2022, Jarrod Bentley updated *Turbo The Tortoise* for the ZX Spectrum. The artist, who created most of the graphics for the original game, said the release marked the title's 30th anniversary but, in early 2023, he made a few more tweaks, creating what has to be the ultimate Speccy version.

The idea came after Jarrod helped **Retro Gamer**'s Martyn Carroll with the *Tournament Arkanoid* mod. Jarrod then decided to mod Thalamus' *Sanxion* as a way of paying respect to Roger Kean and Oli Frey and thought it was a good time to revisit *Turbo*. "At first, I decided to tweak the backgrounds a bit then gave it a major overhaul," Jarrod says. "I didn't touch the sprites because they were Den's. The way they were compressed in memory also meant that I couldn't change them as I don't have the source code.

"But I created a new loading screen based on the original cassette cover – I think the old one was a scan of a sketch that was coloured in. And I added Turbo's head to the game panel – this was supposed to be in the original release but, because it resembled a certain group of turtles, it was left out."

When that version was unleashed, Yura Yasin – known as Goodboy – got in touch wanting to add music to the game from the Commodore 64 version. "They did a release where you could play the vanilla version or the new updated one and somewhere during the conversation there was a mention about moving the game panel and perhaps adding some splash screens," Jarrod said.

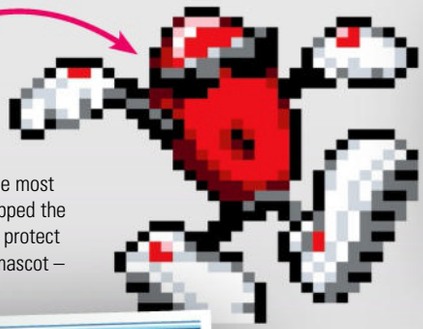
"So I moved the game panel to the bottom of the screen, matching the C64 version. I also made seven screens which Tiboh (whose real name I don't know) added with extra music. All of this makes the game 128K-only but, hey, it's 2023!"

retro GAMER's FAVOURITE...

ADVERGAMES

Most of the time, developers just want to sell you a game, but sometimes developers want a game to sell you something – and if they can, to sell you that game too. Here are some of the most memorable examples

COOL SPOT



■ This was actually the third game starring the 7-Up mascot, but the strength of the David Perry platform game template ensured that it was the most memorable. Interestingly, it dropped the soft drink branding in Europe to protect Fido Dido's status as the local mascot – and his games got cancelled.

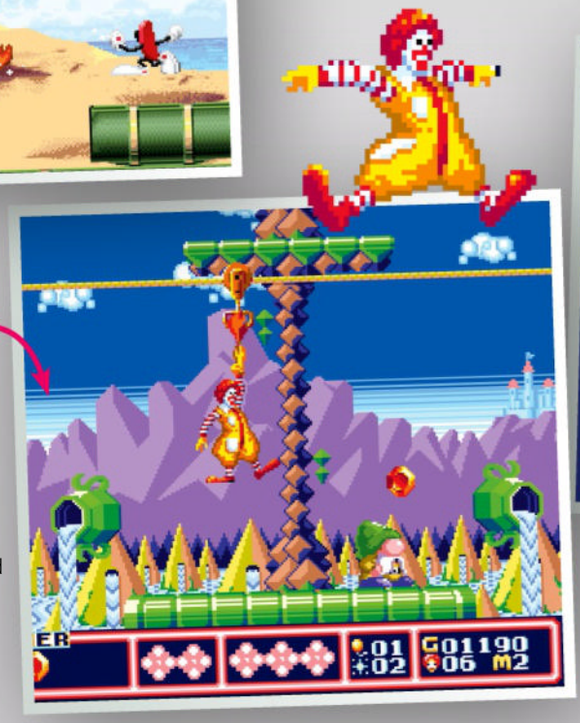
PEPSIMAN

■ After a cameo in the Saturn version of *Fighting Vipers*, the freakishly faceless Japanese Pepsi mascot bagged his own PlayStation game in 1999. It's a pretty good effort, with our thirst-quenching hero permanently running and dodging various obstacles, in a manner similar to later hit mobile games like *Temple Run*.

THE MUNCHER

■ Originally conceived as *T-Wrecks*, this was rebranded for the UK market as a game starring the mascot from the Chewits advert. Perhaps because of that, the highly destructive action is plenty of fun – the Commodore 64 version received reasonable reviews and the Spectrum version got genuinely strong scores.

MCDONALD'S TREASURE LAND ADVENTURE



■ Unlike the other games based on burger chains shown here, this one had Treasure on development duties. Developed alongside *Gunstar Heroes* and released in 1993, it's not up there with the studio's best but as far as licensed Mega Drive platformers go, it's one of the better choices available.

TAPPER

■ Who would have guessed that beers could land Bally Midway in hot water? People didn't like the idea that Budweiser was being advertised to children, so *Tapper* became *Root Beer Tapper* – the better-known version today, thanks to many appearances on compilations.

CHEX QUEST

■ You're an executive with a cereal to market to kids. What game can help you do this? *Doom*, obviously. This total conversion mod was included in Chex cereal boxes as a free CD-ROM, and is so fondly remembered in America that a full HD remake was released on Steam in 2020.

MR WIMPY

■ An 8-bit home-computer game advertising Wimpy – you can't really get more quintessentially British than that. Let's just ignore the fact that it's basically a *Burger Time* clone with a single extra scene to distinguish it, OK? To be fair, if you're advertising burgers, there's no better game to rip off.

SNEAK KING

■ The most infamous of the Burger King Xbox games – yes, there was a series – sees you taking the role of the creepy King mascot, silently accosting random strangers with Whoppers. In mechanical terms it resembles the snuff videogame *Manhunt*, but thematically *Sneak King* manages to be even more disturbing.

DARKENED SKYE

■ When Mars was seeking to make Skittles more popular with adults, it decided upon creating an action adventure game for the PC and GameCube in which the sweets are used for casting magic. That's obvious, right? The 2002 game is no classic, but it's better than you might expect given its origins.

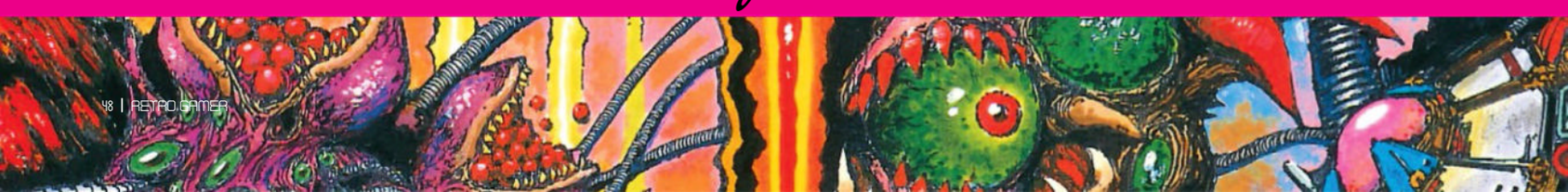
THE MISSION

■ Remember that advert where Edgar Davids, Thierry Henry and pals rescued a Nike football from ninjas? This PlayStation outing attempts to recreate it as a football-based action game. Make no mistake, it's absolute garbage, but we love the audacity of basing an entire game around a single 90-second advert.

A TRIBUTE TO TOAPLAN

FAMED AS THE STUDIO THAT INTRODUCED BULLET HELL TO THE SHMUP GENRE, TOAPLAN'S ARCADE LEGACY IS BEYOND SIGNIFICANT. STAFF WOULD GO ON TO FORM ICONIC ARCADE STUDIOS INCLUDING SHOOTER HEAVYWEIGHT CAVE. YET SHMUPS ARE ONLY ONE STRING IN TOAPLAN'S MIGHTY BOW

Words by Will Freeman



When the frenetic shmup *Batsugun* debuted in Japan's arcades in 1994, it marked the start of a new era for the genre. That's not to say 2D shooters had struggled before. Far from it; they were a founding form of the medium. It was the likes of *Asteroids, Spacewar!* and *Space Invaders* that established the template of what gaming more broadly could be.

Yet it was the team at Toaplan that would elevate and modernise the genre, evolving it from the relatively primitive nature of scrolling shooters like *Xevious*, and towards bullet hell; a genre subset not only defined by menacing difficulty and absurdly high bullet counts, but also beguilingly elaborate scoring systems and cavernous depth.

While Toaplan was founded in 1979, the software house only moved to games in 1984, assembling a team largely formed of former Orca and Crux employees. Together they would make many iconic shmups, including *Tiger-Heli*, *Truxton*, *Twin Cobra* and *Zero Wing*. Each new shooter would demonstrate a little more of what bullet hell might be, until *Batsugun* gave us the first true taste of the form.

Despite numerous console ports, the creatively vibrant, famously energetic Toaplan was ultimately an arcade studio. As such, its fortunes were tied to the success of cabinet-based gaming, with the firm folding in 1994. Staff would go on to form many key shmup studios, however, including CAVE, which continues to define the shmup genre and inspire countless other games, thanks to the impact of works including *DoDonPachi* and *Ketsui*. And shmups were far from Toaplan's only beat.

PERFORMAN

ARCADE • 1985

Made when Toaplan's game department was still working from an apartment, *Performan* marked the studio's second arcade title. It isn't Toaplan's best or most influential output by any stretch. But the fledgling studio was already showing a knack for innovating existing genre templates while furnishing its projects with lavishly detailed pixel art. In fairness, lavish may be a stretch in the case of *Performan*, but in its own quiet way it whispered at what was to come. It appeared loosely inspired by arcade maze titles like *Pac-Man* and *Dig Dug*, yet in giving the player the opportunity to hurl boomerangs at foes, it upped the pace and dynamism of play; something that would soon be defining of the Toaplan design philosophy.

TIGER-HELI

ARCADE • 1985

As the team's first hit success, the military shooter *Tiger-Heli* set Toaplan on the path to reframing what a shmup could be. Inspired by Crux's 1984 effort *Gyrodine*, it also introduced the concept of a bomb to the genre; a stalwart of the form to this day.

Yuge's Memories

"The hardware at the time was quite low spec, so we had a lot of fun during development pushing it to run the software the way we wanted it to. Your helicopter's movement speed is quite slow, and we often saw players try to compensate by pushing the joystick so hard that they inadvertently displaced the entire arcade cabinet. I've even seen a cabinet that had a broken joystick – that was a surprise!"

GUARDIAN

ARCADE • 1986

After the triumphant success of *Tiger-Heli*, the Toaplan team turned its attention to another genre that could be found thriving in the mid-Eighties. Scrolling beat-'em-ups had established themselves as a standard of arcade success at the time, and *Guardian* was Toaplan's first shot at applying its energetic mindset to a template arguably established by another shmup powerhouse. *R-Type* operation Irem had crafted *Kung-Fu Master* just two years previously, and had done rather well out of it, commercially speaking. *Guardian* – also known as *Get Star* in Japan – didn't lure too many coins through its slots, but it did debut the work of videogame artist Koetsu Iwabuchi, who would go on to develop a handsome reputation through contributions to Toaplan titles including *Hellfire* and the legendary meme-machine *Zero Wing*.

» Tatsuya Uemura (L) and Masahiro Yuge (R) were composers by trade, but also handled directing, programming and more at Toaplan.

ROAD TO HELL

THE RISE OF BULLET HELL

IN THE BEGINNING

Long before bullet hell, there were the very first 2D shooters. 1962's *Spacewar!* wasn't really a shmup. But it started the genre – and arguably the gaming form.

EARLY ARCADE ICONS

After games spilled out from the lab to the arcade, it was giants like *Computer Space*, *Space Invaders* and *Asteroids* that asserted the shmup's wild popularity.

IN THE SCROLLS

By the turn of the Eighties, scrolling became a genre-stalwart via shmups like *Caverns Of Mars*. 1982's *Xevious*, though, really set the template for all that would follow.

TOAPLAN'S ERA

In 1984, Toaplan began a journey to take what was established by *Xevious* and its clones, and gradually up speed, bullet count and complexity.

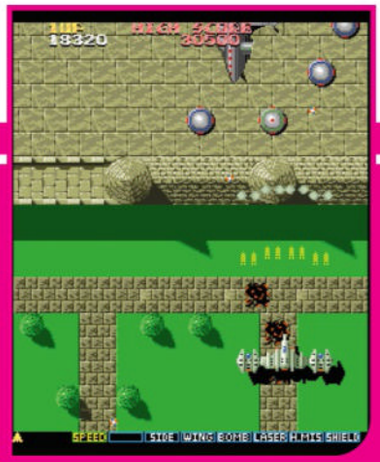
INTO THE CAVE

Toaplan's last shmup *Batsugun* was the first true bullet hell game. CAVE took on the baton, pushing bullet hell (and difficulty) to new heights.

SLAP FIGHT

ARCADE, MEGA DRIVE • 1986

If *Tiger-Heli* had demonstrated that Toaplan knew how to develop a quality shooter, *Slap Fight* asserted that it was ready to push the genre. To describe *Slap Fight* as anything like bullet hell would be some overstatement. And yet speedy, high-ordnance numbers define an experience that outpaced many contemporaries. It also featured on-the-fly modular ship customisation, building on the concept introduced in Konami's *Gradius*.



Yuge's Memories

"By concepting this one as a sci-fi game instead of a realistic shooting game like our previous title, we expanded the range of ideas we could implement. We hid a lot of Easter eggs in this game, and it was fun seeing players react to them after it was released. This was our last title developed for a Z80 main CPU with PSG sound."

FLYING SHARK

ARCADE • 1987

When *Flying Shark* – AKA *Sky Shark* or *Hi Sho Zame* – made its first appearance in arcades, something was striking. Toaplan was attaining new standards for game design and presentation in the shmup genre. It might not match what's offered by CAVE's most recent works, but *Flying Shark* still looks surprisingly modern, considering its age.

Yuge's Memories

"For this title, we switched to using a PCB with an MC68K as its main CPU and a Yamaha sound chip for the audio. As a programmer, sound designer and all-around fan of new technology, I was very excited to wrestle with all this new stuff! I think we managed to achieve our goals of returning to a realistic setting and making a game that could be enjoyed by people all over the world, so I was very satisfied with this one. I remember making final adjustments the night before our deadline while giddily imagining people playing it. That's a feeling I'll never forget."

WARDNER

ARCADE • 1987

While shmups were proving to be an increasingly successful specialty for Toaplan as the close of the Eighties drew near, the studio continued to explore other genres. In 1987 it brought its meticulous artwork and lively design to the side-scrolling action form. Coming in the wake of the iconic Capcom release *Ghosts 'N Goblins*, Wardner did relatively well at arcades, to the point that ports to the Famicom Disk System and Mega Drive followed. *Wardner* never made it to European shores, and for all the praise it attracted for its style and spirit, many saw it as a little too indistinct. In reality, there was considerable depth, particularly in terms of secret and hidden items that would help players reach score thresholds that granted valuable extends. Indeed, *Wardner* might well have helped push Toaplan's effort to furnish shmups with increasingly more substance and hidden complexity.

BUILT FROM TOAPLAN

THE STUDIOS SHAPED BY TOAPLAN

CAVE'S STORY

The most famous bullet hell studio was formed by former Toaplan staff. CAVE pushed what bullet hell could be even further, resulting in wonders like *DoDonPachi*.

RAIZING BECOMING 8ING

Raizing (later 8ing) formed in 1993, and quickly filled with former Toaplan staff. It would debut some truly tremendous shmups including *Battle Garegga*, *Sorcerer Striker* and *Battle Bakraid*.

GAZELLE'S BUSY YEAR

Toaplan staff founded Gazelle, which lasted for just a year. In that time it made the distinct shmup *Air Gallet*, ported three Toaplan games and developed two non-shooters.

TOAPLAN SEQUEL TAKUMI

Takumi was formed by, of course, former Toaplan staff. As well as making *Giga Wing* and *Mars Matrix*, it crafted Toaplan sequel *Twin Cobra II*.

TWIN COBRA

ARCADE • 1987

As Toaplan's tenth game in four years, *Twin Cobra* proved that the studio could deliver quality at speed. Again pushing expectations about what a shmup could be, *Twin Cobra* also demonstrated that its team was starting to perceive the emergence of a new kind of more devoted player; a bifurcation Yuge perceives with a unique framing…

Yuge's Memories

"As PCBs were advancing little by little, this semi-sequel to *Tiger-Heli* was born out of a desire to eliminate the feelings of stress induced by its predecessor. The core concept was 'delivering a fun and satisfying experience for drunk players who are thoughtlessly forcing their way through, and a deep and engaging experience for sober players who are playing strategically'. The Japanese title was *Kyukyoku Tiger* (*Ultimate Tiger*) and we truly aimed to make this our ultimate title in terms of what we were capable of at the time. During a presentation prior to the game's development, I sketched out the concept and setting of the game on a single sheet of paper and forced everyone in the office to sign off on it."

RALLY BIKE

ARCADE • 1988

Considering that the Toaplan team was at the wheel – or rather, handlebars – of arcade racer *Rally Bike*, it's hard not to see the influence of shmups in its high-speed vertically scrolling gameplay. Unsurprisingly, it offered a bounty of depth and ideas that extended perceptions of what its genre could be – and some of that signature quality Toaplan art. It somewhat befuddled critics when making it from arcades to home consoles, but for the players? It's typically remembered as being tremendously fun, and for a time it excelled at attracting players in Japan's game centers. *Rally Bike* also capably showcases some of Toaplan's most captivating audio output.

Yuge's Memories

"I personally love this game and used to play it all the time. The combination of orthodox gameplay and upbeat audio made this a masterpiece that stays with you long after you stop playing. I'd never developed a racing game before, but I'd sure spent a lot of time playing racers developed by other companies. Like shooting games, racing games are very easy to pick up and play, and I think this one is no exception."

TRUXTON

ARCADE, MEGA DRIVE • 1988

With the launch of *Truxton*, Toaplan zeroed in on a visual style that would in future define not only its shmups, but much of the wider genre. The vibrant sci-fi aesthetic is there in many later games by the studio, plenty of CAVE titles, and numerous modern indie shooters.

Yuge's Memories

"This game was developed by a tiny team, so there's a lot of me to be found in it. The Thunder Laser was something I saw in a dream and managed to perfectly recreate in the game itself. I enjoyed implementing puzzle-like elements such as the instant-release bombs and intentionally placed safe spots. I also had a blast composing the audio to match each scene. I had so much fun developing this game that at some points I barely stopped to sleep at all. Of all the games I worked on, this is the one that means the most to me – so much so that I named my current company after it! In Japan it's called *Tatsujin*, meaning 'expert', which was chosen to honour shooting game fans of the time.

THE TURNING POINT

WHY TRUXTON MATTERS SO MUCH

A NEW ERA

Truxton marked a turning point for not just Toaplan, but the shooter genre. It marks the dawn of the modern shmup era.

A VISUAL HISTORY

Truxton upped intensity and depth, but its art leaves the greatest legacy, as evident in everything from *Dodonpachi* to indie gem *Super XYX*.

THE ABSOLUTE BOMB

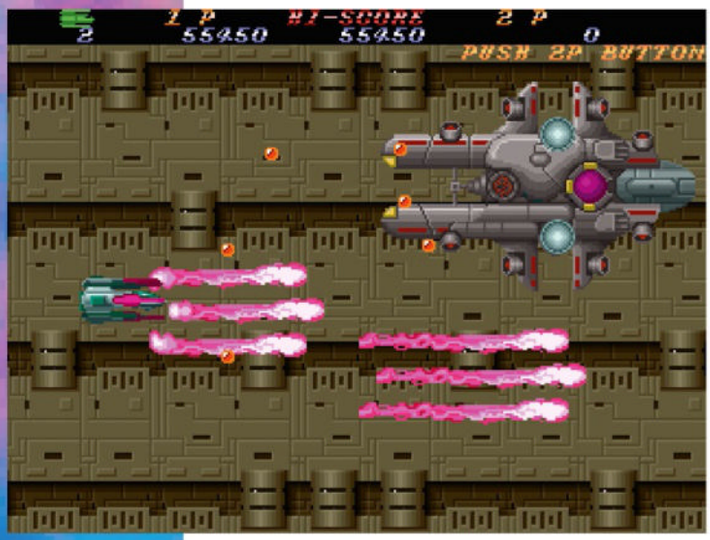
Truxton's most famous feature might be the skull-shaped player bomb explosion. Appreciating its detail in the heat of battle? More than tricky.

MORE TOAPLAN PORTS?

Truxton is also known as *Tatsujin* in Japan; a name given to Masahiro Yuge's current company, which owns most Toaplan rights.

PLAY TRUXTON!

Truxton is one of Toaplan's more available games. Try it on arcade, PC Engine, Mega Drive, PC, Evercade –or Sega Astro City Mini V.



HELLFIRE

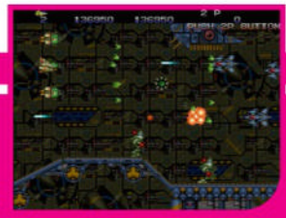
ARCADE • 1989

Until *Hellfire*, Toaplan had stuck to vertically scrolling shmups. A shift in movement direction – perhaps motivated by what the teams behind *Gradius* and *R-Type* were achieving – meant a bounty of new challenges and opportunities for Toaplan. In truth, *Hellfire* wasn't quite so bold in innovating the horizontal form as previous games from the studio had done with verticals. But it brought enticing quality, and a unique weapon system that helped it stand out at the time.

Uemura's Memories

"This was the first side-scrolling shooter developed by Toaplan and is noteworthy as the first title released to market under our own Toaplan brand. With our own game design instincts sometimes running contrary to how things needed to work in a side-scrolling environment, we had a tremendous amount of difficulty dealing with all sorts of issues like player and bullet collision with the ground and obstacles, the direction you attack in not being the direction the player is facing, and so on. But by taking on this challenge, we managed to inject a breath of fresh air into our shooting line-up and widen our fanbase further. Also, this was the first title where I, who has heavy rock influences, composed all the music myself, making *Hellfire* something that also added a new colour to the Toaplan sound palette."

ZERO WING



ARCADE, MEGA DRIVE • 1989

Yes, the PAL Mega Drive version of *Zero Wing* spawned that 'all your base' meme. But Toaplan's second horizontal shmup contributed a great deal more value to the genre. Released the same year as *Hellfire*, it brought things on considerably, and is packed with ideas, personality and tone.

Uemura's Memories

"This title started as a training project for a new, second generation of Toaplan employees, so it has a strong 'create whatever you want' feel to it. Even the mentoring side of the team approached it with a similar attitude, so it includes all sorts of weird ideas like the difficult-to-use Prisoner Beam and the excessive amount of homing missiles you fire, among others. Ultimately it turned out to be quite the unique title and ended up garnering lots of fan support. There were many silly elements like Pipiru, the alien that went on to become our mascot, as well as the generally silly ending, which established our style as a company that valued playfulness."

TWIN HAWK

ARCADE, MEGA DRIVE • 1989

As Toaplan blazed a trail towards bullet hell, it was increasingly sci-fi-themed output that stood as milestones on the journey. And yet the studio never forgot its roots making straight up military shooters. Exploring an alternative history to World War II's conclusion, *Twin Hawk* took the unusual approach of having no flying enemies, and focussed on the notion of piloting a bomber, rather than dogfighting craft. It was also led by Yuichiro Nozawa, who had previously not worked on a 2D shooter. The result was something that looked very familiar, but felt rather distinct. Particularly notable is the bomb mechanic. Rather than fling out an explosive, pilots are joined by a half-dozen additional aircraft, which form a defensive ring before sacrificing themselves with a final flight into the enemy forces.

FIRE SHARK

ARCADE, MEGA DRIVE • 1989

As Toaplan's fifth game of 1989, *Fire Shark* was *Flying Shark*'s sequel. Once more it pushed the visual detail, sonic energy, pace and nuance of previous military shmups. It was still too early to call 'bullet hell', but something special was emerging from within the team.

Yuge's Memories

"With more advanced hardware, we were able to improve things like bomb effects which had been limited by the technology in the original. We also built off the Thunder Laser in *Truxton* to create the Super Fire's bending effect, giving it a greater sense of realism. At the time, we were constantly being asked to make our games more difficult because it was bad for business at the arcades to have people be able to play for too long. But I hated setting the difficulty so high that it negatively impacted the gameplay, so for the overseas version we simply lied and said we'd raised the difficulty but just released it as is. I doubt we could get away with something like that today. "

SNOW BROS

ARCADE, MEGA DRIVE • 1990

As the Nineties dawned, Toaplan briefly turned its attention to platformers. Perhaps inspired by *Bubble Bobble* and its forebear, *Chack'n Pop*. *Snow Bros* set snowman twins Nick and Tom on a 50-stage mission to rescue a pair of princesses. Strangely, while *Snow Bros* isn't one of Toaplan's best-known or celebrated games, it enjoyed some of the studio's highest review scores, enjoying ports on the NES, Game Boy and Mega Drive, and – years on – even a healthy bit of cult status. Where *Bubble Bobble* armed you with the titular bubbles, *Snow Bros* went with snowballs, manifesting a hectic flow and rhythm that set a standard for later genre works. Simply put, it's a hell of a lot of fun, and looks tremendous. The Amiga port in particular was the result of a famously devoted effort to capture the feel of the arcade version, while expanding the content – but it never saw release.

TOAPLAN TODAY

MODERN WAYS TO PLAY TOAPLAN'S GAMES

While the original Toaplan is no more, its games and legacy lives on thanks to Tatsujin, a Japanese developer owned by Masahiro Yuge. Over the last few years, many of Toaplan's classic games have been either converted to modern systems, been re-released on Mega Drive cartridges by companies like Retro-Bit or have been updated for modern audiences like *Snow Bros: Nick & Tom Special*. M2 has been releasing a number of Toaplan shooters recently, including collections for *Same! Same! Same!* and *Tiger-Heli*, while Bitwave Games has been studiously porting classics like *Zero Wing*, *Out Zone*, *Twin Cobra* and *Truxton* to Steam and GOG with more on the way. As videogames continue to rise in price and old hardware begins to break down, it's great to see that this once dead company has been given a new lease of life.

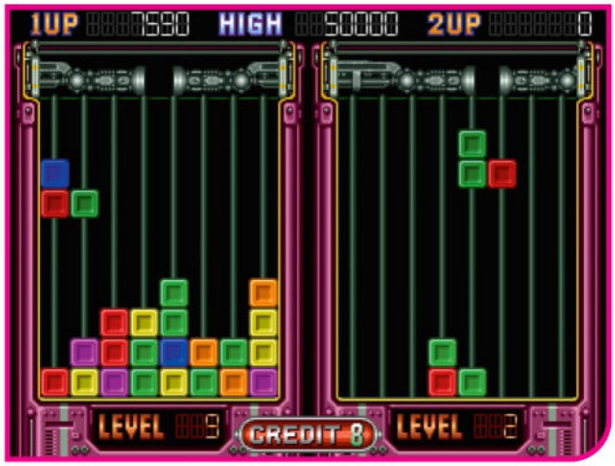
OUT ZONE

ARCADE • 1990

As Toaplan cemented a new vision for the 2D shooter genre, the team also endeavoured to try new approaches. *Out Zone* took the form of a free-scrolling vertical run-and-gun. That let the team explore all kinds of mechanisms around terrain and scenery, bringing a distinct flow and pace, and one of Toaplan's most memorable titles.

Uemura's Memories

"This was Toaplan's first free-scrolling action shooting game. As was the case with *Hellfire*, our experience making vertically scrolling shooters didn't translate to this genre at all, and it proved to be an extremely difficult game to develop. I originally pitched the title, but didn't enjoy run-and-gun shooters myself, so I came up with all sorts of different ideas and mechanics in order to make it into something I would enjoy. Between that and the graphics, which were drawn by incredibly talented artists, the game ended up being an extremely popular title. The game is quite difficult to control, so we made it easier to compensate, which is another thing that led to it being embraced by a wide audience."



TEKI PAKI

ARCADE • 1991

By the early Nineties Toaplan's reputation as a maestro of the shmup form was well established. But until its very last game – 1994's *Snow Bros* sequel – the team would continue to explore other genres. *Teki Paki*, quite plainly, picks up on ideas established by *Tetris*, and the countless games it inspired. Toaplan being Toaplan, however, it wanted to bring the tile-matching genre the pace and energy of a 2D shooter. It certainly managed that. While *Teki Paki* is a fairly conventional competitive tile-laying title, it brings a very distinct vibe, combining intensity and a rather silly spirit; possibly capturing the tone at the studio itself, where remarkably fast turnaround and a playful, knowingly non-corporate approach often defined company culture. After unreleased Mega Drive and Super Famicom ports, the game finally left arcade-exclusive territory in 2021, when it was made available as a downloadable extra for boxed copies of M2's *Kyukyoku Tiger-Heli* Switch and PS4 release.

PIPI & BIBI'S

ARCADE • 1991

On its surface, *Pipi & Bibi's* is an *Elevator Action*-esque arcade platformer embellished with Toaplan's knack for detailed art drenched in personality and character. Spend a little longer with the game, however, and it emerges that it's also very much an 'eroge' game. That is to say, it's an adult-themed game. There was little meaningful connection between the gameplay and the pixelated erotica on display – but the game itself was rather good, asking players to be strategic while darting about at high speed, working their way through buildings placing explosives on computer terminals. The pornographic element? The cartoonish imagery offered is certainly explicit and revealing. It might not compare to modern pornography, but objectifying content is objectifying content. As of this year, however, a family friendly remaster came to Windows and Switch as *Spy Bros: Pipi & Bibi's DX*. Unsurprisingly, the recent release didn't go with the game's original alternative Japanese title; the very hammy, *Carry On*-evoking *Whoopsie!!*.

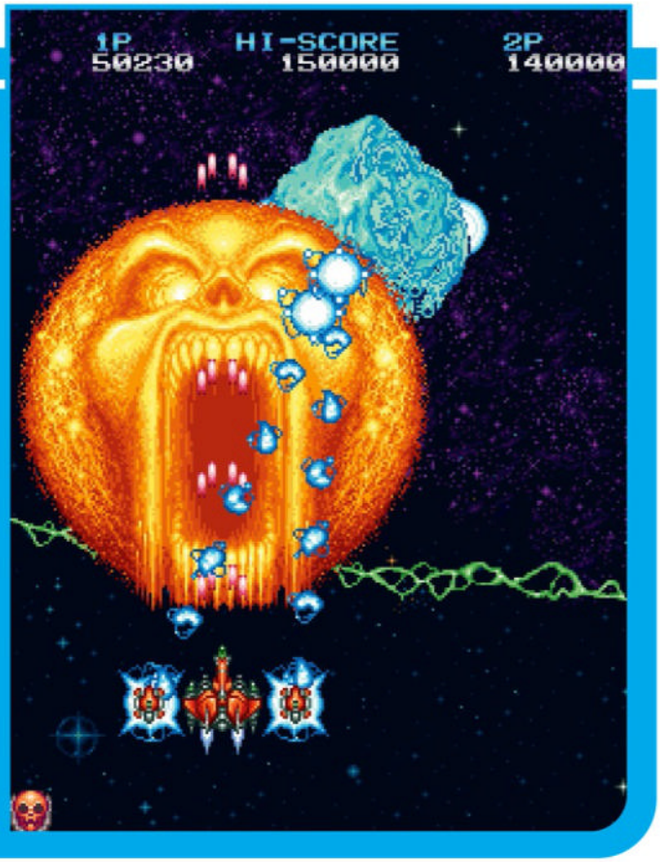
TRUXTON II

ARCADE • 1992

1992 was a fantastic year for Toaplan shooters. *Dogyuun* showcased some of the team's finest visual excellence, while *FixEight* pushed the *Out Zone* concept to a fascinating new place. *Truxton II*, though, was a cut above, bringing together everything Toaplan had learned about shmups.

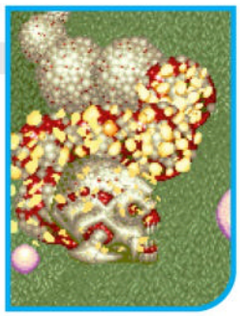
Yuge's Memories

"This was the first time I got to use a four-operator FM chip, and I got to use PCM audio on top of that, which was a hardware combination I'd wanted to try for a long time. However, for cost reasons we had to dispense with using a Z80 to manage the sound drivers, and added our sound drivers to the MC68K we were using as the main CPU instead. I'd never made sound drivers for an MC68K before, so that was fun in its own way, but as a result, whenever performance issues would cause the gameplay to slow down, the music would end up slowing down too. I remember repeatedly telling the main programmer, 'Don't let there be any slowdown!'"



FIXEIGHT

ARCADE • 1992



When the Toaplan team delivered *Out Zone*, they presented one of their most distinct creations yet. The run-and-gun was nothing new. Indeed, the vertical scrolling run-and-gun had already been done – see Capcom's 1985 release *Commando*. But *Out Zone*'s bounty of ideas and unique visual look made it feel unlike any other title. *FixEight* went with what *Out Zone* established and confidently ran with it. On paper it is very much a 'spiritual successor' rather than a true *Out Zone* sequel, but if you're into the 1990 original, *FixEight* is an essential play. It's packed in more ornate level design, all manner of new threats and demands, and a wider range of mechanically distinct player characters. Speaking of which, many believe some of the game's cast to be based visually on celebrities including Mike Tyson and Sharon Stone. Is it true? We may never know. There's a little mystery to the full credits list, and designer Nanpei Kaneko left games years ago to go and work as a magazine illustrator. Strangely, despite all its merits, *FixEight* remains one of the lesser-known Toaplan games.

ON THE RUN

WHY OUT ZONE AND FIXEIGHT DESERVE ATTENTION

- Toaplan vertical run-and-guns *Out Zone* and *FixEight* remain relative curios, despite offering some of the teams' most innovative work.
- Both games blend conventions from shmups like vertical scrolling, and top-down run-and-guns as seen in *Shock Troopers* or *Commandos*.
- The magic is in the terrain. Being ground-based, you'll have to think about cover, hazards, falls and traps.
- *FixEight* added new features, including three-player co-op. *Out Zone* is secret packed, hiding nods to *Flying Shark*, *Truxton* and *Zero Wing*.
- Former arcade-exclusive *Out Zone* is on Steam and GOG, and deserves your time. We're keeping our fingers crossed that *FixEight* makes the leap too.

GRIND STORMER

ARCADE, MEGA DRIVE • 1993

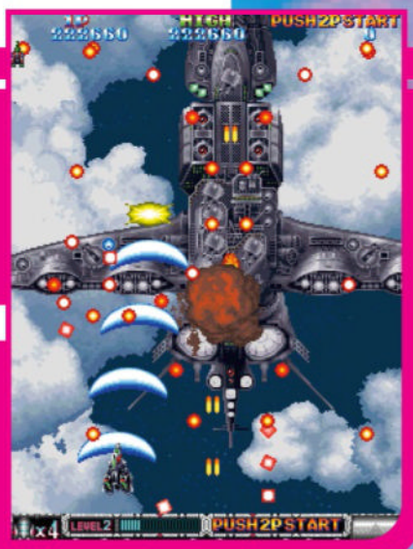
Another Toaplan spiritual successor, this time to *Slap Fight*, came in the form of *Grind Stormer*, which arguably had the future of CAVE in its veins. The team was led by Kenichi Takano, who would later serve as *DonPachi* producer. The game, also known as *V-V*, equally marked the first work in the medium by programmer Tsuneki Ikeda, who would go on to cofound CAVE and become synonymous with the best in bullet hell design. And it's very good indeed.

Yuge's Memories

"This title began in part as an effort to train the new employees we had at the time. I handled the audio again, but for cost reasons we removed the PCM audio we had adopted for *Truxton II* and switched to new hardware that left me with only half the ROM capacity I was used to. I developed new sound drivers to conserve ROM capacity and somehow managed to fit everything in. PCM audio produced drum beats with incredible impact, and reproducing those using just FM synthesis was extremely difficult, so I instead focussed on making the melodies stand out as much as possible."

BATSUGUN

ARCADE • 1993



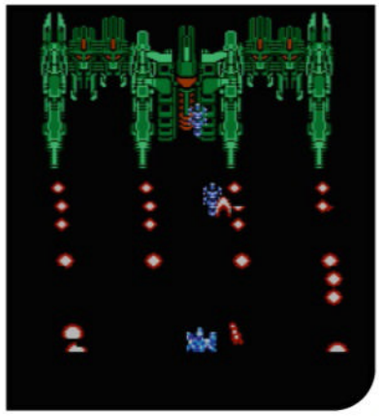
Toaplan's last shooter is a titan of the genre. This was the game that offered the world the first true example of bullet hell. It's tremendously fun, constantly exciting, and not quite as hard as many that would follow. Toaplan's best? Most likely.

Yuge's Memories

"I consider it another milestone in the evolution of Toaplan shooting games. Not only because it features characters more prominently, but because I think it could be said to have birthed the new genre known as 'bullet hell shooters'. I believe that came about both because of new hardware that could display many more sprites at once, and new ideas from the team."

WHAT ABOUT RECCA?

WHY DOES BATSUGUN ALWAYS GET THE CREDIT?



It's generally agreed that Toaplan's *Batsugun* was the first bullet hell game. There were fast, high-bullet shmups before it, and one stands out. *Recca* was developed by relatively unknown studio KID, and pushed the NES to its limits. It's a pacey, aggressive shmup – and it was programmed by Shinobu Yagawa, who went on to contribute to *Battle Garegga*, *Ibara*, *Pink Sweets* and *Muchi Muchi Pork!*, all of which pushed bullet hell in new directions. But bullet hell isn't just about overwhelming ordnance. It's a design philosophy informed by scoring depth, and even a design aesthetic. Some might say it's also a tone, or feeling manifested through game mechanics. *Batsugun* combined all those things with swarming bullets first.

Special thanks to Bitwave Games for arranging the included interviews.

Hardware Heaven

Supervision

» **MANUFACTURER:** Watara » **YEAR:** 1992
» **COST:** £39.99 (launch), £100+ (today, boxed), £65+ (today, unboxed)

With the Game Boy, Nintendo had successfully proven that a technical disadvantage could be overcome by affordability, good marketing and quality software. Watara saw this and decided that it could potentially make some money if it undercut Nintendo with a handheld of its own, and promptly released the Supervision, a device that looked an awful lot like Nintendo's machine with a bendy neck. Rather than marketing and distributing the machine itself, Watara partnered with various international distributors including Quickshot in the UK and Hartung in Germany.

While Watara succeeded in making a cheaper machine than the Game Boy, Supervision games were generally of poor quality – indeed, many were produced by the Taiwanese developer Sachen, best-known for creating unlicensed games for more popular consoles. The vast majority of Supervision games were released in the same year it came out, with just a couple of titles launching in 1993. *

SUPPLIED BY
EVAN AMOS

Supervision fact

■ A second model of the Supervision without the tilting screen was later made available, which has an even greater resemblance to Nintendo's Game Boy.

PROCESSORS: 8-BIT 65C02 (4 MHZ)
RAM: 8KB MAIN RAM, 8KB VIDEO RAM
GRAPHICS: 160X160 RESOLUTION, FOUR SHADES OF GREY
AUDIO: TWO TONAL CHANNELS, ONE NOISE CHANNEL, DMA STEREO OUTPUT CHANNEL
MEDIA: ROM CARTRIDGE (UP TO 64KB)
NETWORKING: DE-9 LINK CABLE
POWER: 4X AA BATTERIES

ESSENTIAL GAME

Fatal Craft

The last thing you'd expect from a relatively weak system like the Supervision is a pretty passable take on *Gradius*, and yet that's what you get here, complete with the signature power-up system. It's obviously rather simplified but that actually works in the game's favour, as the lack of excessive background detail keeps the ghosting of the LCD screen from getting in the way of the gameplay. *Fatal Craft* moves at a decent pace too, which certainly feels like a technical achievement after seeing the likes of *Soccer Champion* in action.

ULTIMATE GUIDE

MAGIC POCKETS

WHEN THE BITMAP BROTHERS SET OUT TO MAKE A "CUTESIE PLATFORM GAME" FOR THE AMIGA, THE RESULT WAS JUST AS WEIRD AND WONDERFUL AS YOU WOULD HOPE FROM THE ROCKSTAR DEVELOPERS. WE DIG DEEP INTO THE MYSTERIES OF MAGIC POCKETS

WORDS BY GRAHAM PEMBREY

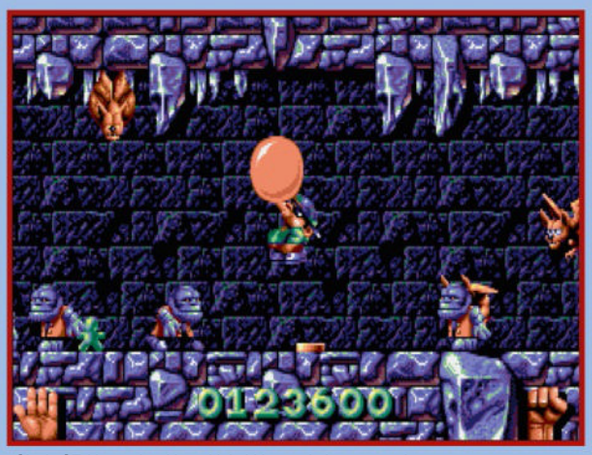
The technicolour cartoon platforming of *Magic Pockets* was an anomaly for The Bitmap Brothers. By 1991 the company had built a reputation for developing exceptional Amiga games with a dark and edgy art style, including sci-fi shooter *Xenon* and cyberpunk-sport classic *Speedball*. Greyscale press photos of the collective looking as though they should be in a punk band, replete with shades and leather jackets, only added to the rock-and-roll aura. So when the Bitmaps decided to make what programmer and designer Sean Griffiths described to *Zero* magazine as "our first attempt at the cutesie platform game", the end result was always going to be less conventional than that description seemed to imply.

"OUR TEAM PORTED THE GAME TO MEGA DRIVE AND DREAMCAST WITH THE SOURCE CODE GIVEN TO US BY MIKE MONTGOMERY"
PHILIPPE NGUYEN

You only need to know the bizarre backstory of *Magic Pockets* to get a sense of the surreal and anarchic capers ahead. The Bitmap Kid is a backwards-baseball-cap-wearing, early Nineties cool dude with strong Bart Simpson vibes, who's been gifted a pair of mystical trousers by a "strange old man" according to the game manual. All is well until our hero's precious toys disappear into the depths of his bottomless pockets. At which point he transports inside his own pockets, as you do, and sets out on a mission across Pocket Land to retrieve his lost playthings.

Scenes are no less bombastic when you reach the introduction sequence, which sees pulsating stars swirling towards the screen to the strikingly high-quality sounds of *Doin' The Do*. Betty Boo's 1990 top-ten hit was sampled and converted to the Amiga by respected composer and sound designer Richard Joseph. As Sean Griffiths told *Zero* at the time, "Betty Boo is very 'now' and it's a very 'now' sort of game." Sean also cited the effervescent arcade platformer

» [Amiga] Make sure to grab a diving helmet before going for a swim.



» [Amiga] Taking to the skies with bubble gum helps you reach new areas.

» [Amiga] Hurtling around on your bike requires some button-mashing.

» [Amiga] You'll box with this brute at the end of the jungle world.

CONVERSION CAPERS

WHAT VERSIONS WERE WORTH YOUR POCKET MONEY?

AMIGA

■ Unsurprisingly given Amiga games were very much The Bitmap Brothers' forte, *Magic Pockets* has the usual high-quality sheen you'd expect from the studio. Loading times are swift and the graphics, music and sound effects are sharp. Not bad at all for a single floppy disk.

ATARI ST

■ It's hard to distinguish between the Atari ST and Amiga versions with the sound turned down. Pump up the volume though and you'll hear thinner sound effects with an Eighties arcade game vibe on the ST version. The Bitmap Kid's digitised speech yelps of "yeah" and "oof" are also absent.

ACORN ARCHIMEDES

■ The 32-bit Acorn Archimedes packed some powerful hardware to rival the Amiga and Atari ST, and this port made use of those capabilities to run a fast-performing game. Frantic scenes unfold as the Bitmap Kid and his foes dart around at sugar-rush speeds.

PC

■ A notable difference in the PC version is some divergent level design in the early stages. This port also introduces a helpful password system so you can pick up where you left off. The Betty Boo introduction music unfortunately doesn't sing nearly as sweetly here, as it's entirely synthesised.

POCKET POWER

TIPS FOR TRAVERSING POCKET LAND

KNOW YOUR STARS

■ *Magic Pockets* has some almost FromSoftware-level cryptic mechanics, including its star system. Collecting exactly one silver star and then a gold star produces a transporter helmet that teleports you to secret zones. Other combinations of silver and gold stars result in different toys appearing.

PERFECT YOUR POWER-UPS

■ After earning 5,000 points, the counter in the bottom right of the screen will cycle between ten power-ups whenever you kill an enemy. Trap and jump into an enemy to produce the current power-up that's showing. Goodies available include milk (an extra life) and the coveted silver and gold stars.

TWIST AND SHOUT

■ When you fall from a height, or leap into a whirlwind or cloud that you've thrown, you'll send the Bitmap Kid careering around the screen in a spin attack. While spinning you're invincible, making this a very efficient way to knock out a large batch of enemies at once.

SCAN FOR SECRETS

■ There are at least two secret areas in each of *Magic Pockets*' 26 levels. With a bit of snooping around, you can find hidden platforms and interesting items. Using the TVs scattered around levels can help too – they give you a handy zoomed-out map view of your surroundings.

WARP BETWEEN WORLDS

■ Each world of the game has between five and eight levels. However, it's possible to jump straight from the first level of each world straight into the next. To work this dark magic, you'll need the patience to experiment hard with stars and transporter helmets to move through secret areas. Good luck!

» [Amiga] Unleashing a bag of pin tacks obliterates nearby baddies.

TV

FROG

EAGLE

GORILLA BOSS

» [Amiga] Bouncing around on a space hopper is the finest way to travel.

GORILLA

JELLYFISH

» [Amiga] Ice can be used to build bridges in the frosty lake levels.

Rainbow Islands as a big inspiration. You can spot signs of this influence in the game design, from levels being littered with colourful sweets you can gobble up to amass points, to the ability to 'capture' enemies using an arcing projectile weapon. Instead of throwing rainbows, the Bitmap Kid reaches deep into his pockets to hurl a weather element that differs across each of the four worlds he explores. To begin with you'll throw magic whirlwinds around a dark and dingy cave world, before clouds become your weapon in the tropical jungle. You'll then chuck ice blocks in the semi-underwater lake world, and snowballs in the final freezing mountain zone.

Each element has different qualities to help you get through the increasingly difficult levels. Clouds become raindrops that you can throw onto roots to make vines grow, allowing you to leap up towards higher areas. Whirlwinds can send you flying around the screen, bashing baddies as you go, while ice is handy for making bridges over lakes and snowballs can be rolled into your foes. Holding the fire button for longer builds a larger projectile, the biggest form of which absorbs enemies into a trap that can be popped to produce sweets or power-ups. As you gather points, some fairly complex scoring and power-up mechanics come into play, with higher scores and different combinations of silver and gold stars resulting in special items appearing.

> "WE HAD SIGNED FOUR GAMES WITH THE BITMAP BROTHERS, BUT SOME CODE WAS MISSING SO WE COULD ONLY PORT ONE GAME"
> PHILIPPE NGUYEN

Between all these items and a whole load of enemies you can encounter, there are a huge number of sprites in *Magic Pockets*. As with the backdrops, these sprites were the work of Bitmaps artist Mark Coleman, who was also simultaneously hard at work developing the ancient Greece-inspired mythological platformer *Gods* while doing this. It's impressive to think that *Magic Pockets* was largely the result of Sean and Mark working intensely together as a two-man team, with some additional coding input from The Bitmap Brothers cofounder and managing director Mike Montgomery.

As you progress, levels become increasingly elaborate. Fortunately, help is available if you lose your bearings. Fire a weapon and a small arrow will spin alongside it, pointing in the direction of the kid's 'best toy' – the show-stopping power-ups found near the end of each stage. On collecting this toy you'll have chances to hurtle through baddies at speed on a bike, bash gorillas with boxing gloves, bounce about on a space hopper or explore underwater depths using a diving helmet. Uncovering these special items is a real highlight of the game and gives you some gleeful relief after battling through its tough stages.

I'M ON TV!

BRINGING THE MAGIC OF MAGIC POCKETS TO MOTORMOUTH

In what was probably the closest thing to Twitch that existed at the time, anyone up early enough on a Saturday morning in 1991 could watch live as call-in viewers attempted to top the *Magic Pockets* high-score board. This was a regular segment of the children's show *Motormouth*, which used a preview level of the game hastily put together by Sean Griffiths especially for the programme.

The Bitmap Kid was renamed Mighty Mo for the show, and as the presenter Andy Crane explained to audiences, "Mighty Mo lives in the *Motormouth* dungeon and with your help on the phone, Mighty Mo makes his way through the *Motormouth* dungeon, zapping the bad guys and eating the sweets to accumulate points." Callers could make their moves by shouting "jump", "zap" or "walk". A significant amount of lag was at play, so respect – and top prizes including a Walkman – was due to anyone making it to the upper echelons of the scoreboard.

The Bitmaps had also previously managed to get *Xenon II* onto the show *Get Fresh*. This successful PR was all thanks to their connection with an Amiga-loving TV industry professional, who liked to use the hardware to produce graphics for shows.

REMAKING MAGIC POCKETS

PHILIPPE NGUYEN ON CREATING BRAND-NEW SEGA PORTS

■ You might think *Magic Pockets* would have been a neat fit with early Nineties consoles, with all its vibrant cartoon platforming appeal, but the game was only released for home computers. That would change in 2018 when the French indie publisher PixelHeart, which specialises in limited-edition retro games, developed and distributed a port of *Magic Pockets* for the Mega Drive, followed by one for the Dreamcast the following year.

Company founder Philippe Nguyen explains that his motivation for bringing the game back stemmed from growing up playing the developer's games on his Atari ST. "I'm a huge fan of The Bitmap Brothers. I had a great time with my friends on *Speedball*, I loved *Cadaver*, stressed on *Xenon II* and raged on *Magic Pockets*!"

Philippe and his team would go right to the source to acquire the rights to republish the game, by getting in touch with the previous Bitmap Brothers managing director himself. "Our team ported the game to Mega Drive and Dreamcast with the source code given to us by Mike Montgomery," Philippe says. He admits that working with such raw material had its challenges. "Old code in assembly language is never easy. We had signed four games with The Bitmap Brothers, but some code was missing so we could only port one game."

PixelHeart launched physical releases of the games with two brand-new cover designs crafted by Philippe Dessoly, the artist behind cult 1993 SNES platformer *Mr Nutz* and the 2018 remake of the arcade game *Toki*. "We also made new music for *Magic Pockets* because if you look at the original there is no in-game music," Philippe adds. The lively soundtrack is an excellent fit, mixing well with the classic Betty Boo introduction song. Both releases are available via PixelHeart's website (pixelheart.eu/en/home).

» [Amiga] Amazingly this is not a raspberry, but an enemy trapped in a whirlwind.

» [Amiga] Gorillas with boxing gloves are just some of the enemies out to stop Bitmap Kid.

The finale of each world brings not a boss, but an 'end-of-world event'. That means a bike ride against rock-men in world one, a boxing match with a massive gorilla in the next, and an aquatic treasure hunt before you move to the final mountain world. Watch out for the enemy AI as you work through the game too. As the manual explains, "Some bad people ignore Kid. Others hate him and are angry that he wants his best toys back so they throw and spit things at Kid. Some bad people even eat the sweet things lying around." Just as that suggests, enemy behaviour can be very unpredictable. Some stone men in early levels will flee from you, for example, while others will pursue you relentlessly across platforms.

***Magic Pockets* was released in October 1991 by Renegade Software, the company The Bitmap Brothers had set up to publish its own creations.** *The One* deemed the game "a triumph" in a 94% review that favoured the elaborate scoring mechanics and argued, "The beauty of *Magic Pockets* is that you can play it to just about any level that you want: you can simply stroll around searching for your toys and killing everything you see in the process, or you can actually use your head to get the absolute maximum results." *Amiga Action* gave a similarly high score of 93%. But a review from *Amiga Power* was more downbeat, serving up a 75% rating and describing the game as "very disappointing" compared to other Bitmap Brothers releases. The reviewer predicted the game's difficulty and hard-to-grasp power-up system would mean "no one's going to be loading this one up for fun six months down the line".

The latter sentiment certainly prevails among some Bitmap Brothers fans. Opinions seem divided over whether the game should be celebrated as a surreal, delightful tangent for the developers, or swept under the carpet in discussions of their otherwise faultlessly cool back catalogue. It's certainly strange to think the game was created in parallel with *Gods* and *The Chaos Engine* with their much more earnest tones.

> "WE ALSO MADE NEW MUSIC FOR MAGIC POCKETS, BECAUSE IF YOU LOOK AT THE ORIGINAL THERE IS NO IN-GAME MUSIC"
> **PHILIPPE NGUYEN**

In interviews you can find in the excellent book *The Bitmap Brothers: Universe* written by Duncan Harris, The Bitmap Brothers head honcho Mike Montgomery suggests the company may not have survived without the cash flow generated by *Magic Pockets*. The game sold well, was ported to several systems, and achieved a Saturday morning TV level of fame (see I'm on TV!). In the book, Mike also defends *Magic Pockets* as being "like Marmite" in having fans and critics in equal measure. He also argues, "I really like that it was different." And different is certainly what it was. For all its bubble gum-sweet branding, you'll find an unruly, anarchic game created by a small team that were ripping up lots of rules when you look closely at *Magic Pockets* – and that was surely the ethos of The Bitmap Brothers down to a tee. ✱

SC
365540

Star Parodier

IT'S NO JOKE

» PC ENGINE » 1992 » INTER STATE/KANEKO

I could never claim to be Retro Gamer's resident shoot-'em-up fanatic when I've got Darran as a colleague, but I do have a real fondness for the genre, which was cultivated as I savoured the Dreamcast's later import releases. Unfortunately, my friends didn't share that passion. They were certainly curious as to what a late Dreamcast release might look like, but ended up being repelled by the difficulty of games like *Ikaruga* and *Border Down*. I think it's a long-term problem for the genre, with even superficially inviting games like *Fantasy Zone* often proving to be too much for many players to handle.

If you've ever struggled with the genre in that way, I'd suggest *Star Parodier* as a game that is cute on the outside and not obnoxiously challenging. Much like *Parodius* is a comedic version of *Gradius*, *Star Parodier* is a less serious take on the *Star Soldier* series in which you pilot the Paro-Ceaser, Bomberman, or a PC Engine and take on enemies like swimming otters, leaping ninjas and ice-skating snowmen. What makes *Star Parodier* so good for beginners is a relatively gentle difficulty curve – the early stages are a breeze, it's easy to power-up after losing a life and shields are plentiful for players who just seem to be magnetically drawn to enemy fire.

It's not just a game for novices though, as plenty of hardened shoot-'em-up fans love *Star Parodier* too. It's easy to see why – it looks great, with lots of neat little graphical touches livening up its colourful stages, and the CD soundtrack provides excellent accompaniment to the action. Unfortunately, like many of the better shoot-'em-ups *Star Parodier* is not a cheap game to pick up in its original form. However, if you really do have an interest in learning the genre, it's on the PC Engine Mini along with plenty more excellent shooters to try once you've honed your skills.

THE MAKING OF BLADE WARRIOR

BEFORE CREATING MULTIMEDIA PUBLISHING EMPIRE REBELLION WITH HIS BROTHER CHRIS IN THE EARLY NINETIES, JASON KINGSLEY SET OUT TO CREATE A UNIQUE AND HUGELY ATMOSPHERIC 16-BIT GAME CALLED PALADIN – LORD OF THE DANCING BLADES, LATER RENAMED TO BLADE WARRIOR

WORDS BY RICHARD HEWISON

» [Amiga] When Murk catches up with you, an encounter in the depths of hell is unavoidable.

IN THE KNOW

- **PUBLISHER:** IMAGE WORKS
- **DEVELOPER:** JASON KINGSLEY, GARRY KNIGHT, JAMES BOWMAN
- **RELEASED:** 1990
- **PLATFORM:** AMIGA, PC
- **GENRE:** ARCADE ADVENTURE

Jason Kingsley's first encounter with computers was at school in Leicestershire in the Seventies. "It was a huge industrial-looking computer, programmed using punched tape and it sat in a corner classroom," says Jason. "You could take programs on rolled-up tape in your blazer pocket, and the little punched holes were much sought after as kids could scatter them around the school!" The Kingsley family's first home computer was built by Jason's younger brother Chris. "Chris built an Edukit, which had something like 256 bytes of memory. He soldered it all together and got it working, but we didn't really do much with it."

Their first ready-made home computer was a Commodore PET, followed later by an Atari 800, which was their first dedicated gaming machine. Jason played a number of early classics on the Atari, including *Star Raiders* and a number of Activision titles based on the early arcade games. "Even back then, both Chris and I always felt that we could make games," he says. "Weirdly, it never crossed our minds that we couldn't. The naivety and enthusiasm of youth I guess had us thinking it's not rocket science, which of course in some ways it is!"

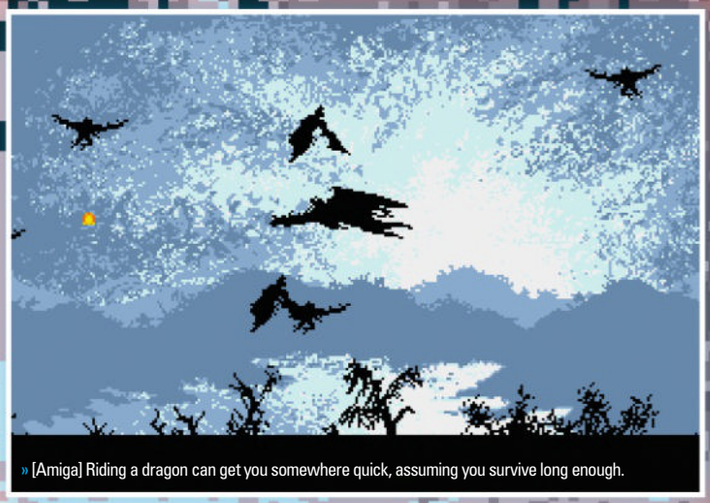
Jason's interest in games, and role-playing games in particular was already well established by the time home computers came along. "The game I first discovered was *Tunnels & Trolls*, which I think entered the UK before *Dungeons & Dragons*," says Jason. "I also played a lot of board games like *Diplomacy*, and I

DEVELOPER HIGHLIGHTS

MURDER! (PICTURED)
SYSTEM: ATARI ST, VARIOUS
YEAR: 1990

CAPTAIN PLANET AND THE PLANETEERS
SYSTEM: ATARI ST, AMIGA
YEAR: 1992

EYE OF THE STORM
SYSTEM: AMIGA, PC
YEAR: 1993



» [Amiga] Riding a dragon can get you somewhere quick, assuming you survive long enough.

JASON KINGSLEY

» Jason Kingsley OBE is the cofounder, CEO and creative director of the Rebellion Group of companies. In his spare time he looks after and trains horses for medieaval tournament and performance. He also presents *Modern History TV* on YouTube and runs the podcast *Future Imperfect*.

JAMES BOWMAN

» After finishing both *Blade Warrior* and college, James worked on Game Boy titles for Probe Software, before making the jump to Direct3D at Microsoft, followed by Infinite Reality at Silicon Graphics, and architected GPUs at NVIDIA. James lives in rural California and consults on special-purpose GPUs and CPUs and other projects.

CONVERSION CAPERS

WHICH BLADE WARRIOR VERSION PALADINS IN COMPARISON?

AMIGA

■ Smooth parallax scrolling for the foreground and background, sampled atmospheric sound effects and a bigger choice of colour palette for pathways meant that the Amiga version was always going to be the best overall experience for players. There were subtle differences between the versions, where the two programmers implemented the game in a slightly different way. The Amiga version was potentially slightly easier to play when it came to fighting the wandering monsters in the forest, but the foes took more hits to defeat.

PC

■ With one main colour palette for all the regions of the land (even when playing the VGA version), and with nothing more than PC speaker beeps for spot sound effects, the IBM PC version didn't look or sound as good as the Amiga and was also much tougher to play. Attacks were more frequent, especially from the air, although monsters tended to take fewer hits before they were defeated, and more trees and statues gave up spell ingredients in comparison to the Amiga version.

made my own variants including *Nuclear Monopoly*, where you could buy a nuclear missile and launch it around the board. Wherever it landed would wipe out that part of the board and reset it to ground zero."

> "THE STANDARD TROPE FOR MOST GAMES BACK THEN WASN'T USING THE FULL SCREEN AREA TO IMMERSE THE PLAYER"
> JASON KINGSLEY

Academic studies loomed large for Jason in the early Eighties, studying for a zoology degree at Oxford University. "I did zoology because I'm fascinated by the natural world and love animals, which is why I have so many horses now."

Despite working towards his degree, games were never far away, and once his studying days were over, Jason opted to stay in Oxford. "All my friends were either in Oxford or in London, so I stayed and rented a room in a bedsit in Cowley Road."

Having learned to use the art program DPaint on the Amiga, Jason got a job working for Oxford Digital Enterprises, better known as ODE. "I was reasonably good at doing pixel art," he remembers modestly. "Whilst I was there I also found out that I had a bit of a talent for organising things, and for game design."

Jason produced artwork for ODE including games based upon Tom Clancy's novel, *The Hunt For Red October*, the board game *Trivial Pursuit* and the TV series *Yes, Prime Minister*, as well as a tongue-in-cheek parody of *Space Invaders* called *Better Dead Than Alien*, but even during that prolific period, he was already thinking about going it alone. "The standard trope for most games back then wasn't using the full screen area to immerse the player," he says. "I always liked how Cinemaware's *Defender Of The Crown* was played out in full screen, and I really wanted to create something with three-dimensional movement, with the foreground and background moving independently."

It quickly became apparent that memory was going to be a problem even on the Amiga, so Jason came up with a unique solution. "I thought if I did the graphics in black and white like shadow puppets but really ramped up the animation, I could have the occasional flash of lightning that lit up your character for a moment before going to silhouette again."

Jason created a screen using DPaint that showed a spooky-looking forest with the silhouette of an armoured knight wearing a winged helmet and carrying a big sword. That single image set the visual tone for the game, and Jason then began writing a backstory and game design. "I ended up with a three-page document, printed on a dot matrix printer which Mirrorsoft then commissioned."

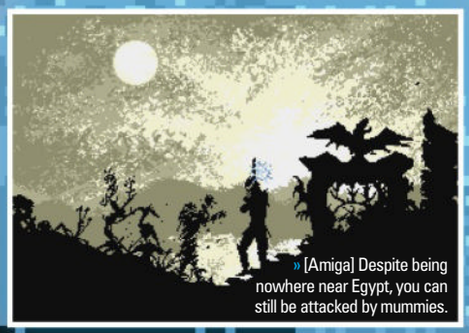
Jason also made the decision to seek representation through Marjacq Micro, the agency set up by Jacqui Lyons to specifically cater for computer-game development teams. Jacqui was

» [Amiga] Sometimes the smallest foes can be some of the toughest to defeat.

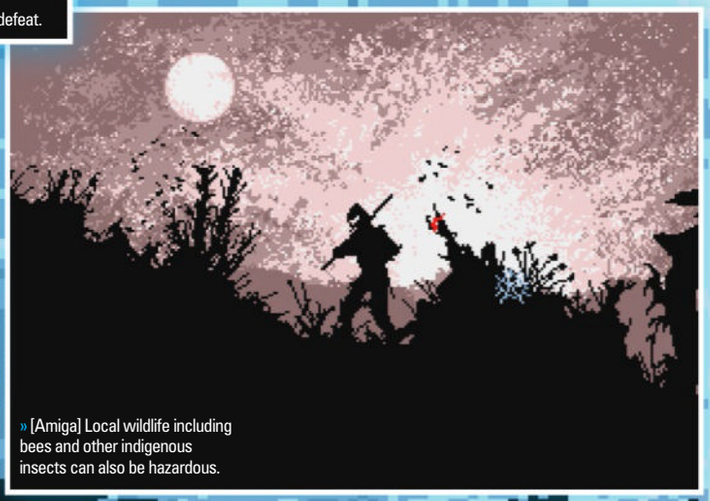
» [Amiga] Some magic spells give you longer lasting protection whilst exploring the land.

So, we meet at last. I see that you need my help. Well, speak and it shall be done. I can help you thus only three times for this is the way of things. What is your desire?
You are a welcome sight, indeed. I need your help on my wearisome journey.

» [Amiga] When the time is right, you will need this wizard's help more than any other.



» [Amiga] Despite being nowhere near Egypt, you can still be attacked by mummies.



» [Amiga] Local wildlife including bees and other indigenous insects can also be hazardous.

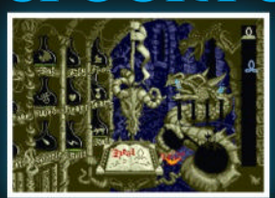
particularly formidable when it came to contracts, and she negotiated terms and conditions that proved very useful later on. "It was considered the right thing to do at the time, and although it was a short business relationship, Jacqui was very good although as I was one of her many clients, I only got a small fraction of her time." When the game was signed, it was called *Paladin – Lord of the Dancing Blades*, but it wasn't long before Mirrorsoft asked for an alternative, so Jason offered *Blade Warrior*.

Whilst the silhouette graphical style was chosen for technical reasons, it gave *Blade Warrior* a very distinct and unique visual style that made it stand out from the crowd. The menagerie of monsters thrown into the forest included banshees, demons, goblins, mummies, werewolves, wraiths, trolls, vampires, skeletons and giant spiders, all gloriously animated in silhouette, leaving the player's imagination to fill in the rest. Jason's idea of momentarily showing the graphics in full colour during a storm was dropped as development progressed, with James Bowman working on the IBM PC, and Garry Knight tasked with the Atari ST and Amiga versions. "Garry Knight and I had worked together at Softstone in Brighton, and he introduced me to Jason," says James. "Mirrorsoft wanted to adjust the game, apparently with no end in sight, so we were all scheduling other things along with *Blade Warrior*, and I was in university at the time, so for intervals it just stalled."

A change of project manager in late-1989 got things moving again, and from then on development was relatively uneventful, although one significant change became inevitable, with the Atari ST version dropped. There is a lingering memory of the parallax scrolling being far too slow for the standard ST to cope with, but the exact reasons are long since forgotten. "Garry was ahead at first, but as the game progressed, I caught up," remembers James. Co-development sessions were arranged in

SPOOKY SURVIVAL TIPS

HOW TO SURVIVE BLADE WARRIOR

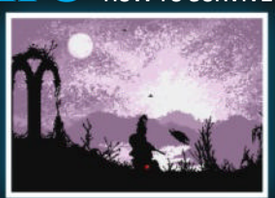


GATHER INGREDIENTS

■ Your absolute first priority is to get spell ingredients for Heal and Water, then return to your tower and at least brew Heal and have it ready to use! *Blade Warrior* can be a challenging game so stocking up on vital ingredients will make your quest a whole lot easier.

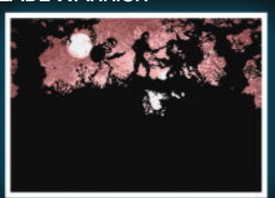
ARCHWAY REPRIEVE

■ On the Amiga, most ground-based monsters move at the same speed as you, which means they can be very hard to shake. Keep ahead of the monsters and reach an open stone archway to escape down a different path, giving you much needed temporary respite.



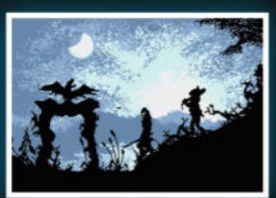
RINSE AND REPEAT

■ Find a tree or statue that gives up sweat or tears (spell ingredients), strike them with your sword, take the ingredient and find the nearest open stone archway. Go through, then immediately return to the tree or statue for more ingredients. Repeat until you have a good stock.



HIT AND GRAB

■ On the Amiga, when fighting multiple monsters that give up spell ingredients, quickly pick up the ingredient when it's dropped, as only one can be lying on the ground at a time. This increases your chance of getting multiple ingredients during a successful battle.



OPENING PATHS

■ When you first unlock a stone archway, go through it, then return and go through it again. This handy little manoeuvre ensures that the gate displays as being open from either pathway, saving much confusion and precious time when making a quick getaway later on.

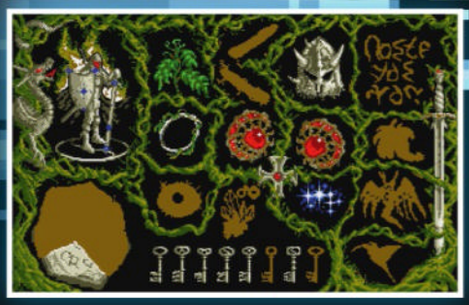
FATED CONNECTIONS

DID FATE PLAY A PART IN 2000 AD?

Soon after *Blade Warrior* had been signed, Image Works approached Simon Bisley to produce the fantastic box artwork, and his wonderful painting featured on the packaging and advertising for the game. Simon went on to become a hugely successful and prolific artist, including entering the comic world of *2000 AD* where he produced iconic art for *ABC Warriors*, *Slaine* and *Judge Dredd*.

Ironically, Jason Kingsley's Rebellion became *2000 AD*'s publisher in 2000, and the 2000 AD links don't stop there either. Mirrorsoft was based in an office building in South London called Irwin House, at 118 Southwark Street. The building is long since demolished, but before Mirrorsoft moved in, the very same building had been home to *2000 AD*'s editorial team in the mid-Eighties when it was part of IPC. During Mirrorsoft's tenure at Irwin House, letters would often arrive at the office, addressed to Tharg The Almighty, the infamous alien editor in chief of the comic since its launch in 1977. Seeing how *2000 AD*'s future owner used to visit that building without knowing of the connection, and seeing how his game featured a Simon Bisley painting on the cover, there might be something to the idea of fate after all!

» [Amiga] The map shows your current location, the location of the wizard towers, and maybe someone else.

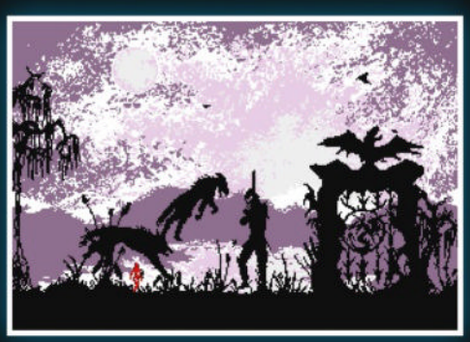


» [Amiga] Collected artefacts, keys and fragments of the stone tablet are shown on the inventory screen.

an effort to get the game finished, and James' recollections become very hazy at this point, for good reason. "We all smoked like chimneys except for Jason. I don't remember a word of complaint from him, but it must have been awful!"

> "WE ALL SMOKED LIKE CHIMNEYS EXCEPT FOR JASON"
> JAMES BOWMAN

As a complete audio-visual experience, the foreground and background parallax scrolling, continuous soundtrack of sampled screeches, buzzes, thunderclaps and the clash of steel all worked surprisingly well on the Amiga. The PC version was nowhere near as pretty or immersive, but the game itself was still a real challenge, with the player controlling the eponymous Blade Warrior. Their task was to reunite seven pieces of a shattered stone tablet which would give them the chance to have their sword enchanted, which they then used to defeat the evil Murk, Skeleton Lord Of The Dancing Bones. Each tablet fragment was owned by a wizard, and finding the artefacts they would be willing to trade for a fragment made up the majority of the game. Wizards could also trade knowledge of magic spells with the player, giving the player extra abilities. Of course, the quest was constantly interrupted by Murk's monster minions, and staying alive and collecting spell ingredients kept the player occupied the rest of the time. Testing was equally hassle free from the publisher's perspective, although ensuring the game fitted into 512KB of RAM on the PC stirs a few long dormant memories.



» [Amiga] You might have a brave heart, but you still should beware the werewolves.

Reviews for *Blade Warrior* on its release were mostly positive, although some found the game a little repetitive and quite hard to play. Dying inside the first few minutes before attaining the ingredients required to make the default Heal spell turned a number of people off before they had made any progress in the quest at all, and in hindsight giving the player an easier ride on their home pathway might have been a good idea. However, the game was praised for its unique visual style, and in more recent times several modern games have employed a similar look, including *Limbo*, *Feist* and *Monochroma* to name just a few.

Whilst *Blade Warrior* was being released, Jason also found the time to appear in a high-profile movie production. Having learned to ride a horse when he was younger certainly paid dividends when he featured in a major Hollywood movie being shot in the UK in 1990. "Quite a few productions were filmed in and around Oxford back in my student days, and I was on a list of extras," recalls Jason. "We were paid £80 a day, which was a good gig to get on. I remember going to Blenheim Palace for *Black Beauty* (1994), got changed, stood around, got fed, had no idea what was happening, went home and didn't really do anything! When I did *Robin Hood: Prince Of Thieves*, I was in lots of different scenes on different horses, but you wouldn't recognise me. In fact, I don't even recognise me!" he adds, laughing. "I was hired for a week, and although I was getting paid, it was a bit boring to be honest, which I found very frustrating."

When Mirrorsoft was suddenly dragged kicking and screaming into administration at the end of 1991, Jason was able to extract *Blade Warrior* from the ensuing chaos thanks to his agent. "The contract Jacqui had agreed with Mirrorsoft allowed me to reclaim my rights from the administrators," says Jason, who then negotiated with Zeppelin Games to re-release the PC and Amiga versions the following year. *Blade Warrior* got a second lease of life, and for a year or two afterwards, Jason continued to contribute to other publisher's games. However, plans with his brother Chris were gathering momentum to set up their own development and publishing company. *Blade Warrior* had made an impression, but the seeds of Rebellion were being sown, and the rest, as they say, is history.

Richard Hewison worked on *Blade Warrior* as its producer.

Future Classic

Modern games you'll still be playing in years to come

Info

- **System:** PS4, PS5
- **Year:** 2018
- **Publisher:** Sony
- **Developer:** Insomniac Games
- **Key People:** Ryan Smith, Joe Valenzuela, Jon Paquette, Jacinda Chew

Go Deeper

» *Spider-Man* features a brand-new story and is set in a unique universe known as Earth-1048.

» A spin-off sequel, *Marvel's Spider-Man: Miles Morales* appeared in 2020 and a full sequel, *Marvel's Spider-Man 2* is planned for later this year.

» [PS5] *Spider-Man* is a virtual who's who of classic villains with the likes of Scorpion, Kingpin and Shocker all present and correct.

Spider-Man has had something of a chequered history when it comes to videogames, but in 2018, Insomniac Games decided to take on Marvel's iconic superhero and in doing so it created the greatest Spider-Man game of all time

Words by Darran Jones

MARVEL'S SPIDER-MAN

THE BACKGROUND

Considering it had focussed on original games for over two decades, *Spider-Man* must have felt like a huge departure for Insomniac Games. Famed for titles like *Disruptor*, *Spyro The Dragon* and the wildly popular *Ratchet & Clank* series, Insomniac was finishing up on its Xbox One exclusive *Sunset Overdrive* when work on *Spider-Man* began in earnest.

Spawned from the same engine that had given birth to both *Ratchet & Clank* on PS4 and *Sunset Overdrive*, the Xbox One exclusive could almost be seen as a dry run for Insomniac's later game, with *Spider-Man* effortlessly improving on the 2014 release in almost every way.

Insomniac had worked with Sony many times in the past across all of its consoles, but the inclusion of Marvel added a further wrinkle for the developer to deal with. While Marvel is very hands-on with its projects, Insomniac certainly didn't find it a hindrance with its community manager James Stevenson telling Adam Mathem of redbull.com in 2017, "It's kind of awesome, to be honest. Our goal is just to do right by the character in what will be a fresh story, but also an authentic one for fans." The decision by everyone involved to create a brand-new standalone story would prove to be one of *Spider-Man*'s greatest strengths.

THE GAME

If we wanted to be churlish we could simply say that Insomniac's game is little more than a prettier-looking version of Treyarch's *Spider-Man 2* which debuted on consoles and PC in 2004. That's not really fair though, as Insomniac has done a tremendous amount of work to build on the exciting open-world game mechanics that made Treyarch's game feel so exciting to play when it was originally released.

» [PS5] There's a large number of cool gadgets you can create in *Spider-Man* and many of them can be upgraded.

» [PS5] Combat in *Spider-Man* is excellent. It's fast, fluid and there's plenty of room for improvisation.

» [PS5] Insomniac nails Spider-Man's character. Look how cocky he's being here.

Things of note

A REMASTERED DELIGHT

Spider-Man Remastered on PS5 is the definitive version, running at 60fps and including all the DLC. It's not a free upgrade, though. Bah!

FURTHER ADVENTURES

DLC includes *The Heist*, *Turf Wars* and *Silver Lining*, which focus on characters like Black Cat and Hammerhead.

A SUIT FOR EVERYTHING

There's a huge number of suits to collect in *Spider-Man*. We particularly love the Vintage Comic Book Suit option, as it looks incredible.

MEET MILES

When you're not sneaking around as Mary Jane Watson, *Spider-Man* also lets you play as Miles Morales who received his own spin-off game in 2020.

TRIBUTE TIME

Spider-Man not only features a very loving tribute to Stan Lee, but also reminds you of just how lifelike the characters in the game look.

Sure, you can make the argument that *Spider-Man* is yet another open-world adventure, but there's an organicness to Insomniac's game that makes every part of it join together with a cohesion that similar titles simply can't manage. As Peter Parker swings around the city he'll receive important updates from allies, listen to Jonah Jameson rant about him on his new podcast, recover stashed backpacks filled with nostalgic items linked to past adventures and be updated on the locations of any nearby criminal activities. There are photos to be snapped, pigeons to be rescued and gas vents to be shut down, and it's all woven together beautifully to create a New York that is as lively and exciting as the one featured in the comics.

Combat is also a huge part of *Spider-Man*'s appeal as it not only highlights the flexibility of Insomniac's in-house engine, but also the sheer grace, athleticism and power of Spider-Man himself. Centred around just three buttons: one for dodging, one for web-based attacks and the last for physical attacks – Insomniac's fighting engine is not only superbly robust but insanely flexible. Goons can be easily bypassed with a quick backflip, a couple of strikes will stagger someone, while webbing can be used to disarm opponents or remove them from combat immediately by sticking them to nearby walls or even the ceiling. Think of the rhythmic flowing combat of Rocksteady's *Arkham* games with a touch of verticality and you'll have a good indication of just how exciting *Spider-Man*'s many brawls can be.

The flexibility of *Spider-Man*'s fighting is particularly apparent during the game's many boss fights and, coupled with some well-timed Quicktime Events, you really get the sense of what it feels like to be everyone's favourite neighbourhood Spider-Man. Spidey's powers only grow as he level-ups and as he gains more skills you'll be able to pull off a tremendous amount of moves, which are further augmented by the many cool gadgets he can make.

There's more to Insomniac's game than simple brawling though, with stealth elements being utilised in certain sections. These normally deal with Spidey slowly dismantling a larger group of enemies, but occasionally you'll play as secondary characters like Mary Jane Watson and Miles Morales as they use their wiles to get through enemy-infested areas without being caught. They're perhaps the weakest element of the game overall, but they're largely handled well and further highlight the game's flexibility. Equally good is *Spider-Man*'s entertaining story which pulls from numerous aspects of the hero's lore and boasts a tremendous amount of classic enemies, including Doctor Octopus, Scorpion, Rhino and Electro to name but a few. The end result is a tremendous love letter to one of Marvel's greatest heroes.

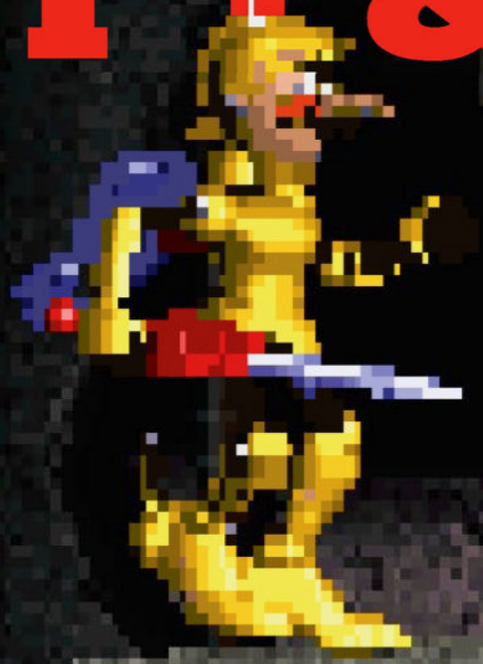
WHY IT'S A FUTURE CLASSIC

Capturing the essence of Spider-Man is no easy task, but it's something Insomniac effortlessly achieved. *Spider-Man* not only captures the core of Marvel's popular superhero, it also manages to convey the sheer size, diversity and opportunities that can be found in a sprawling metropolis like New York. In fact, *Spider-Man*'s open world is so intoxicating to navigate that we continued to explore its many streets and buildings long after we'd completed the main story and additional DLC. *Spider-Man* may have been born from the same creative minds that formed *Sunset Overdrive*, but it turned out to be something so much bigger, bolder and better. Little wonder Sony ended up buying Insomniac in 2019 for $229 million. ✱

THE MAKING OF CLOCKWORK KNIGHT 1 & 2

INITIALLY A STAND-ALONE TITLE, CLOCKWORK KNIGHT WAS SPLIT INTO TWO SO THAT THE FIRST PART COULD BE RELEASED SOON AFTER THE SATURN'S LAUNCH. FORMER SEGA DESIGNER KATS SATO REVEALS HOW HIS ORIGINAL DESIGN EVOLVED INTO TWO MEMORABLE PLATFORMERS

WORDS BY RORY MILNE



IN THE KNOW

- **PUBLISHER:** SEGA
- **DEVELOPER:** TEAM AQUILA
- **RELEASED:** 1994
- **PLATFORM:** SATURN
- **GENRE:** PLATFORMER

The growing pains of the games industry as it transitioned from a 2D medium to a 3D one are well documented. Sega's Saturn was at the heart of this story, and designer Kats Sato's early 2D/3D Saturn title *Clockwork Knight* reflected these times.

Arguably, everything changed when Sega received word of the impressive 3D tech powering Sony's forthcoming PlayStation. 3D Saturn games then suddenly became Sega's top priority, as the designer of *Clockwork Knight* remembers. "We had heard a rumour that the PlayStation could display a lot of polygons, but we couldn't believe it, because technically that was quite difficult to do," Sato observes. "Our hardware architect hadn't designed the Saturn like that, because Sega had a history of making games with big sprites and background images. However, the Saturn could display *some* polygons, so we *could* make 3D games, and that became Sega's mission."

Subsequent revisions to the Saturn's hardware enhanced its 3D capabilities, and around the same time Sega asked some of its coin-op staff to develop for the console,

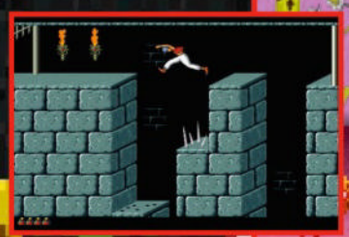
DEVELOPER HIGHLIGHTS

SONIC 3D
SYSTEM: MEGA DRIVE, VARIOUS
YEAR: 1996

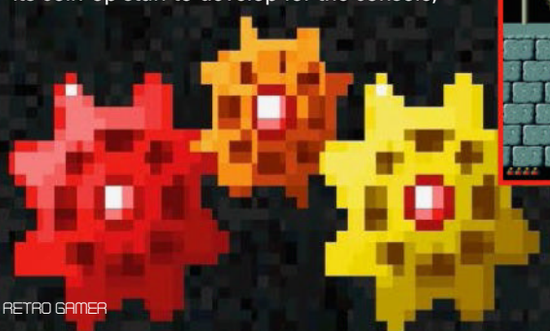
SONIC R (PICTURED)
SYSTEM: SATURN, VARIOUS
YEAR: 1997

METROPOLIS STREET RACER
SYSTEM: DREAMCAST
YEAR: 2000

» [Saturn] If you need to reach somewhere high up in *Clockwork Knight* find something to bounce on.



» [Mac] Kats Sato's *Clockwork Knight* design was inspired by the Mac version of *Prince Of Persia*.



» [Saturn] Most of the hazards in *Clockwork Knight* are 3D and move into and out of the screen.

which resulted in Sato changing departments and disciplines. "When Sega decided to start the major project of developing the Saturn, I was working in the AM1 Department as an artist and my boss was the department head," Sato notes. "He then moved to the consumer department, and he personally assigned me to join him there. I then became a game designer, and *Clockwork Knight* was my first game design."

Not only was Sato a rookie designer, he was also designing for hardware that was still in development, and so he played it safe in terms of his debut design's 3D elements. "Because it was quite difficult to use a lot of polygons I decided to make a side-scrolling game," Sato reasons. "I wanted to make it like *Prince Of Persia*, because its 3D environments were really good, and with something like that we could make unique traps using 3D effects. My player character wasn't initially cute, he was more serious, and there wasn't any jumping or punching, it was more about trying to avoid traps."

Of course, the junior designer's ideas needed to be approved, and even when they were there needed to be some form of oversight from more experienced hands. "I presented my concept to Sega's president at the time Nakayama-san, and he was impressed," Sato beams. "Yuji Naka was in the board meeting too, and he was also very positive about my idea, so it was decided that I should proceed with the project. Since I had no experience of being a game designer, Oba-san – a producer at Sega – managed the project team, and I became one of the team members. There was also Ito-san, who was the senior game designer, and he worked with me."

» [Saturn] Instead of dispatching foes with the Clockwork Knight's key you can use them as projectiles.

» Designer/producer of the *Clockwork Knight* games Kats Sato currently works for a Malaysian games firm.

» [Saturn] When it's not in use as a sword, the Clockwork Knight's key can unlock locked obstacles.

A certain amount of evolution followed as the feel and gameplay Sato had designed was reviewed, but this did nothing to diminish his contribution to the project. "After talking with Oba-san and Ito-san we decided to change the tone from quite serious with traps to a bit more like a *Mario* game," Sato recalls. "I was mainly in charge of the basic gameplay concept, the story,

"I WANTED TO MAKE IT LIKE PRINCE OF PERSIA, BECAUSE WITH SOMETHING LIKE THAT WE COULD MAKE UNIQUE TRAPS USING 3D EFFECTS"
KATS SATO

CLOCKWORK CLUES

HOW TO TACKLE SEGA'S TOY CUPBOARD PLATFORMERS

PERFECT PLATFORMING

■ Always look before you leap in *Clockwork Knight*. Often as not there are enemies or hazards lurking out of sight, so it pays to jump up or across to new areas with your weapon flailing. Keep an eye out for collectables too, as you can accidentally knock these off platforms.

OBJECT LESSON

■ *Clockwork Knight* is crammed full of power-ups and pick-ups, and it's well worth exploring out of the way areas for them. The most common are keys that restore energy and coins that you can gamble with. These are wagered in tricky shell games, where you can win extra lives.

TREASURE HUNT

■ One of the fresh features in *Clockwork Knight 2* is its playing card-based treasure hunt. There are four cards per level, and if you find them all you get a gold key that fully restores your energy. Then if you find all 32 hidden around the game you get a useful level select code.

DONKEY DASH

■ New to *Clockwork Knight 2* are stages where hero Pepper rides on his donkey Barobaro. These levels are forced-scrolling, but Barobaro can speed up or slow down in order to avoid hazards. He can also dispatch opponents for his owner by launching his detachable head at them!

OFF TO THE RACES

■ An interesting set of bonus levels in *Clockwork Knight 2* has the game's protagonist racing against two of his comrades: Le Bon and Prunchau. They aren't overly fast, but as the races are set on obstacle courses you really need to memorise them if you want to finish first.

> "I THINK THE MOST MEMORABLE BOSS WAS THE TV WITH LOTS OF HANDS! ITS SCREEN COULD CHANGE ITS FACE DEPENDING ON IF IT WAS ANGRY OR SURPRISED"
>
> **KATS SATO**

the characters, the movies and the effects. Because my background was art, those were the aspects that I was most involved in." A game like *Mario* needs a suitable protagonist and Sato settled on the titular clockwork knight called Sir Tongara de Pepperouchau III, or Pepper as he's better known.

One particularly notable aspect of *Clockwork Knight* was its hybrid 2D/3D playfield, where its sprite hero and opponents battled it out among polygon environments. "With the player character Pepper we tried to do some tests in 3D," Sato explains, "but because of some technical issues with displaying the number of polygons required, if we had made him 3D then he would have looked worse than the characters in *Virtua Fighter*. He also wouldn't have looked cute. So our artist made a 3D model of Pepper and rendered it in 2D. However all of the traps were made of 3D polygons."

Depicting Pepper using sprites rather than polygons allowed for a greater amount of fine detail in his design, and this fed into the weapon that the hero was given. "Pepper could use a key as a weapon as well as to open treasure boxes," Sato points out. "When I came up with the Clockwork Knight concept he didn't have a key. He just had a sword, but once we started the project properly we decided what would make suitable enemies, traps and weapons in the world of the toys in the game's house. I think the key was one of the ideas that came from that."

This domestic setting also followed through to *Clockwork Knight*'s environments and toy opponents, which the game's hero Pepper could pick up and use as projectiles. "We chose books and other household objects. But we had to pick objects that were quite simple shapes so that they didn't use too many polygons," Sato clarifies. "Also, we wanted *Clockwork Knight* to have 3D levels, and when the player character moved from left to right you really felt that the objects were 3D, and that they were moving. Then there were items that were just sprites such as toys that you could pick up and use."

The hazards in *Clockwork Knight* were created out of polygons, however, and this was emphasised by a coiled spring sprite that gave players a unique perspective. "We picked many objects that we could use in the game, and the game design team then tried to figure out which were suitable for traps," Sato considers. "We tried to think about the advantages of using 3D models, because we needed to do something different from 2D platform games. By having a spring for Pepper to jump on, he moved from the bottom of the screen to the very top, so you could see the top of the 3D objects behind him. That made the game seem *really* three dimensional."

The game's 3D credentials were boosted further by its boss fights, where the camera zoomed in when its hero and mayors were close and out when they were far apart. "We tried to find the most attractive way to view the bosses' 3D worlds, and we discussed it in-depth with the technical people," Sato ponders. "Because those stages were practically fixed screen they didn't scroll too much, and that allowed us to do some quite challenging things. Zooming in and out of the screen was one of the techniques that the programmer suggested. We also wanted to rotate the camera, but we couldn't do that."

The bosses in *Clockwork Knight* were straight out of a toy box, and they ranged from weird to wonderful. Appropriately enough, the final mayor impressed the most. "I think the most memorable boss was the TV with lots of hands!" Sato concurs. "It was quite a simple shape, because TVs were like boxes at that time. But it had hands! Also, its screen could change its face depending on if it was angry or surprised, so it was a really fun boss."

Although fun, *Clockwork Knight*'s mayors were tough, but after fighting them players could restore lost lives by placing bets in a shell game featuring 3D rotating gift boxes. "I remember we wanted to show some 3D models moving in those stages, and it was

» [Saturn] Once set in motion, certain objects in *Clockwork Knight* can give you safe passage.

» [Saturn] Enemies in *Clockwork Knight* respond differently when attacked, so you have to learn their behaviours.

» [Saturn] Coins found in *Clockwork Knight*'s main stages can be used in bets to win extra lives.

» [Saturn] Like the original, you move to new areas of *Clockwork Knight 2* via exits such as locked boxes.

» [Saturn] *Clockwork Knight 2* is far more ambitious than its predecessor due to its longer development time.

WHO'S THE BOSS?

TIPS ON TOPPLING THE CLOCKWORK KNIGHT GAMES' MAYORS

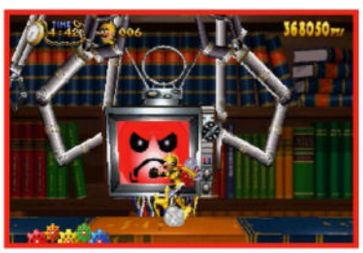
DANDY BOB

■ *Clockwork Knight*'s opening boss is a freakish blue toddler dressed in a top hat and tails, but he's not as challenging as he appears. Concentrate on avoiding Bob's hat when it's on the move, otherwise you can decimate his hit points without worrying about him retaliating.

DOUBLE JETTER

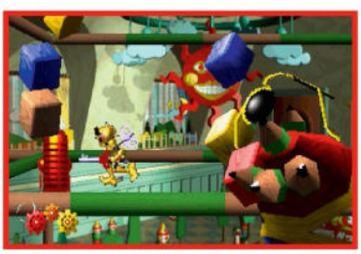
■ Take care of the foot soldiers Double Jetter parachutes in before landing, then attack his upper body until he takes off. Repeat this a few times and he's toast, but get your shots in quickly or else he fires boomerang missiles for you to contend with during your battles.

CRAZY TV



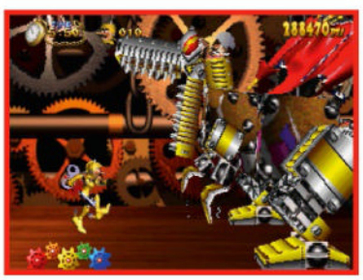
■ The last boss in *Clockwork Knight* alternates between attacking with his arms and with his circuit board. For the former, stand in front of his screen, run from side to side and try to slice his arms off. Then for the latter, stay clear of where he slams his circuits down!

FUNKY SNAKE



■ Not too tricky, but *Clockwork Knight 2*'s first mayor has a knack for taking up all the space on the screen, so careful positioning is a must. With this in mind, target the microphone at the end of his tail whenever you get near it, and before too long you'll take him out.

GARLUCH THE DRAGON



■ An epic challenge, *Clockwork Knight 2*'s final boss breathes flames and swings its tail around like a whip. Stand under its chin, and jump up to attack its snout when safe to do so. You have to repeatedly decapitate it and then fight its head, until it eventually explodes.

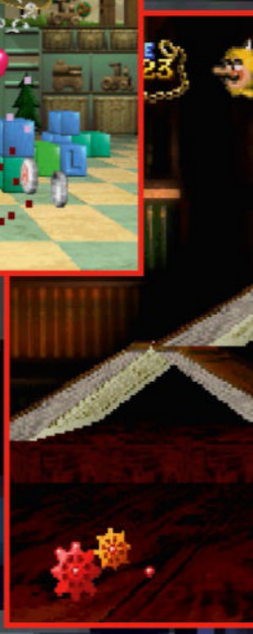
quite natural for Pepper to use his key to open the boxes," Sato recollects. "It was quite different from the rest of the game, because you had to gamble! It was also quite difficult, but if you could follow the boxes while they were moving then you could pick the right one after they stopped."

Another area of *Clockwork Knight*'s design was tweaked when a timer was added to its core levels. This wasn't down to Sato, but he fully supported the change. "That was a last-minute decision, because from that point I think the senior game designer Ito-san made the decisions," Sato makes clear. "The game's original concept was mine, but game designers would leave some decisions to other people, although we were discussing the game design day and night."

Developed in short order for a release just after the Saturn's launch date, *Clockwork Knight* left a lot of content on the cutting room floor. However, Sega had plans for this. "Because we had to develop *Clockwork Knight* for prototypes of the Saturn there were many problems and difficulties," Sato concedes. "Together with Oba-san and Ito-san we had made a lot of stages and traps, and we had created a whole story, but we couldn't finish these elements for when Sega launched the Saturn. That was why we made *Clockwork Knight 2*."

But rather than basing the sequel purely on unused assets, *Clockwork Knight 2* was also given fresh content, such as a treasure hunt with end-of-level rewards. "After

» [Saturn] Backgrounds grow and shrink in *Clockwork Knight 2* to let its hero move forwards and backwards.



» [Saturn] Unlike *Clockwork Knight*, its sequel has eggs that you crack open to reveal collectables inside.

» [Saturn] Pepper's stead Barobaro can ride to the back of the screen in *Clockwork Knight 2*

"WE COULDN'T DISPLAY THAT MANY 3D OBJECTS BECAUSE THE CHARACTER WAS MOVING SO FAST, SO WE MADE THE STAGES WITH BAROBARO QUITE DIFFERENT"

KATS SATO

we decided to split the game into two I think the senior game designer felt there needed to be new features for *Clockwork Knight 2*," Sato contemplates. "We were a bit worried about having a second volume, because we didn't originally expect there to be two games. Maybe that was why the game designer tried to think of additional elements like collecting the playing cards."

Entirely new gameplay followed in the form of forced-scrolling stages where hero Pepper rode Barobaro – a loyal donkey with a detachable head for a ranged weapon! "We couldn't put as many 3D objects in those stages as there were in the other levels," Sato admits, "but by making them about something similar to racing then Pepper wouldn't be touching or holding any 3D objects. We couldn't display that many 3D objects because the character was moving so fast, so we made the stages with Barobaro quite different from what we could do with many polygon objects."

Although light on polygons, these stages used the sprite tech inside the Saturn to move the heroic donkey and Pepper

» [Saturn] The Bosses Galore mode in *Clockwork Knight 2* lets you play as its hero's rival Ginger.

between the front and the back of the screen. "The Saturn was good at changing the scale of sprites," Sato enthuses, "so it was possible within the technical limits of the hardware to have Pepper and Barobaro go forwards and backwards by making their sprites bigger and smaller. That was a hardware advantage of the Saturn. It was fun, because it was all new, and the team kept asking the technical person if *this* was possible and was *that* possible!"

One possibility came in the form of obstacle races between Pepper and his fellow toys, although players had to scour the sequel's core levels in order to find them. "The hidden races were created by new development staff," Sato remarks. "We were concerned about there being enough content, so we asked these programmers and artists to come up with ideas for minigames. I think the idea of the races against La Bon and Prunchau came from them once they had joined us."

Of course, these sprints for power-ups could have been incorporated into the follow-up's main stages rather than hidden, but there were good reasons for not doing so. "The style of the minigames was totally different, I think that's why we kept them secret," Sato believes. "This was a game like a movie, where Pepper was trying to rescue his girlfriend, and that informed the game design. But those minigames were separate from that story, and that was why we made those a secret. It was also because some of the playtesters complained that they were too difficult!"

Regardless of its challenge, *Clockwork Knight 2* was praised for its additional content, and it later appeared with the original game on a two-game disk. This included a bonus mode, where you took on all the bosses from the two *Clockwork Knight* titles. "Because it was a bonus pack we added bonus stages and bonus minigames," Sato explains. "You could change player characters in the Bosses Galore mode and play as Pepper's rival Ginger, and it would have been technically possible to play as him in the main levels as well. But I don't think that would have fitted the story."

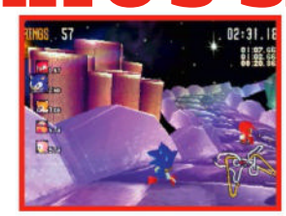
Where the *Clockwork Knight* titles' designer is more certain is with his thoughts on the two adventures, and although he hasn't revisited them in a while, it's clear that the second part is his favourite. "I haven't played them for a long time because I don't have a Saturn!" Sato exclaims. "But they were fun, both to play and to develop. I think *Clockwork Knight 2* is better than the first game, because after we decided to split the original into two the team came up with many new ideas for the second one. So I like *Clockwork Knight 2* a little better, because it has more to it."

KATS SATO'S SATURN CV

MORE SATURN TITLES THAT KATS SATO WORKED ON

BAKU BAKU ANIMAL

■ A clever twist on *Tetris*, *Baku Baku Animal* has you arranging falling animal blocks next to blocks of their favourite food, which they eat and then disappear. A second player or the CPU does likewise, and whoever keeps their side of the screen clear longest wins the round.



SONIC R

■ Although a racing game, *Sonic R* is just as much about exploration and collection as it is about first place finishes on twisted tracks. Hidden areas and multiple paths through courses allow you to shave seconds off lap times, and they give you places to look for pick-ups.

MANX TT SUPERBIKE

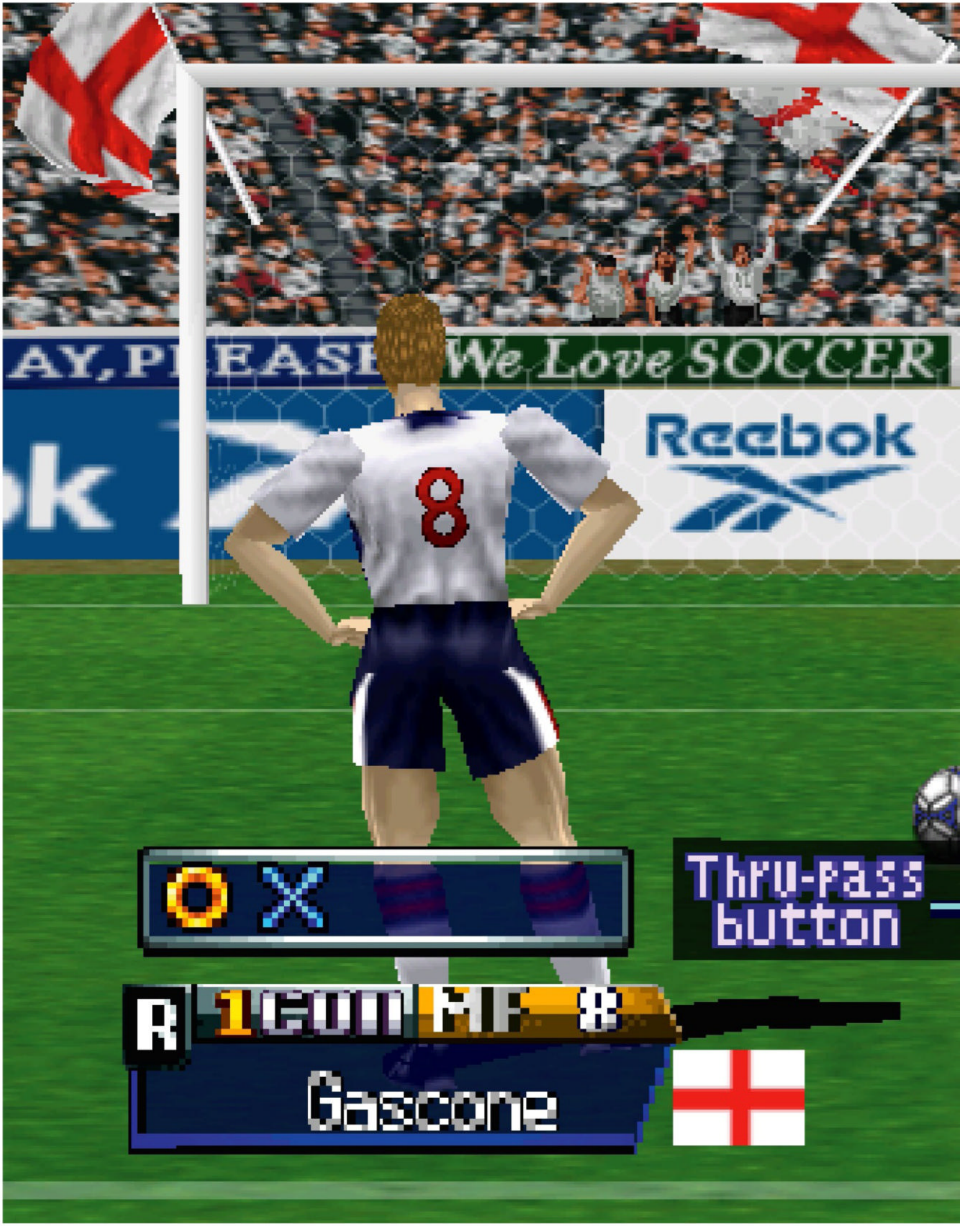
■ It's testament to how closely *Manx TT SuperBike* channels the sport it's based on that it plays so differently from other racers. There's no drifting or jumps, and its tracks are narrow roads. The key is to aim for a perfect racing line, and corner at just the right speed.

SEGA WORLDWIDE SOCCER '98

■ This follow-up to *Sega Worldwide Soccer 97* adds Premiership club sides to the original's roster of national teams. *Soccer '98* focusses on free-flowing football, which is facilitated by the game's lenient referees and responsive AI players.

PANZER DRAGOON SAGA

■ *Saga* continues Sega's rail-shooter series in RPG form, while reimagining the earlier titles' dragon fights as semi turn-based combat. On-foot and aerial exploration, problem solving and character interactions are also added to the mix.


We Love SOCCER
Reebok
8
Thru-pass button
R 1 COM MF 8
Gascone

International Superstar Soccer '98

A GAME OF TWO HALVES

» RETROREVIVAL

» NINTENDO 64 » 1998
» KONAMI COMPUTER ENTERTAINMENT OSAKA

I generally have no interest in football and normally give any football game a wide berth. Sure, I've got a fairly recent edition of *FIFA*, but that's generally so I have some common ground with the partners of Melanie's friends when they pop over. The only football games I've ever been remotely interested in were *Sensible World Of Soccer*, the early editions of *Ultimate Team* (before EA turned it into a hideously cynical money grab) a few *Winning Eleven* games and Konami's superb *International Superstar Soccer '98*, or *ISS '98* as it's affectionately known.

Konami's game felt like a revelation to me when I discovered it on Nintendo's console. I'd obviously played various 3D football games before, normally when I visited friends, but none of them led to a purchase like *ISS '98* did. Brilliantly paced, surprisingly complex and stuffed with exceptional animation I couldn't get enough of it and I began to play it religiously.

Although I was generally rubbish at the game, I did enjoy the minigame where you could take part in penalty shootouts. In fact, it became something of a bonding experience for when the partners I mentioned earlier would occasionally come over. I hate making small talk, but I didn't need to be awkward when I could suggest playing a quick game of *ISS '98* and use the penalty shootouts minigame to "Right the wrongs of the past," as a certain partner liked to say.

So I started to live a dual *ISS '98* life. With friends and family, Konami's game became part of a key rotation of multiplayer titles that included *Super Smash Bros*, *GoldenEye 007*, *Gauntlet Legends* and *Mario Kart 64*. But when the husbands and partners came over, *ISS '98* became this weird way of making England great again, with victories often accompanied with, "Just you wait, Darran, we're going to win the next World Cup." Twenty-five years later and it still hasn't happened. Oh well. ✱

TINGLE: UNSUNG HERO

HE'S ONE OF THE ODDEST AND MOST DIVISIVE CHARACTERS NINTENDO HAS EVER CREATED. ONCE A REGULAR GUEST STAR IN THE LEGEND OF ZELDA SERIES AND NOW A FORGOTTEN MISFIT WITH A CULT FOLLOWING, THERE'S JUST NO STOPPING TINGLE

WORDS BY ASHLEY DAY

It's fitting that one of Nintendo's weirdest *The Legend Of Zelda* characters made his debut in one of the most unusual *Zelda* games; *Majora's Mask*. In this unconventional adventure, packed full of oddball characters, Tingle stands out as one of the strangest. Link first meets Tingle in North Clock Town, where he attaches himself to a balloon to gain a bird's eye view from which to draw maps and sell them to Link.

His role in the game is a functional one but it's his appearance and personality that make Tingle so memorable. His full-body green jumpsuit, complemented by bright red pants worn over the top, and an unconventional face with a creepy soul patch and drunkard's red nose, certainly make him eye-catching for all the wrong reasons. There's something a little bit off about this map seller. Talk to him a while and you'll learn that the diminutive, impish Tingle is actually a fully grown 35-year-old man, a disappointment to his father and, he claims, the reincarnation of a fairy.

By all rights Tingle should be a tragic character, and yet his flamboyant personality and contagious self-confidence suggest he just couldn't care less what others think. As he concludes your first encounter by throwing a handful of fairy dust in the air, with a cry of, "Tingle, Tingle! Kooloo-Limpah!" it's impossible not to fall in love with the little guy. Or so you'd think…

By the time Tingle made his next major appearance, in *The Legend Of Zelda: The Wind Waker*, the tide of goodwill seemed to have turned against him. Though he'd been redesigned with a soft, cartoony appearance fitting *The Wind Waker*'s cel-shaded style, Tingle proved to be divisive in his GameCube outing, provoking a dramatically aggressive response from certain players.

The animosity toward Tingle became so loud that in June 2004, IGN.com published an article entitled "IGNcube's 2004 'Die, Tingle,

Die! Die!' Campaign". It's hard to tell how seriously the article was intended to be taken but the tone is unusually hateful, calling Tingle a "nutty clown freak" and "the most hated entity in the *Zelda* universe". Though some outlets clearly felt differently – Eurogamer called Tingle a "delight" in its original *The Wind Waker* review – there was a growing chorus of discontent around Tingle. In 2010, for example, GamesRadar US called Tingle "*Zelda*'s Jar Jar" and emphatically stated that the series would be 20 times better without him.

On the one hand, it's easy to understand why *The Wind Waker* players channelled their frustrations into Tingle. His role was made much more integral as Link needed to buy sea charts from him, at extremely high prices, in order to fully complete the game. Many players legitimately felt annoyed by this and saw Tingle as a physical embodiment of their frustrations.

On the other hand, some criticisms are unfairly aimed at Tingle's character, with some comments that almost certainly wouldn't fly today. "His sexual orientation remained a great, dark mystery," reads a particularly problematic line of the un-credited IGN article, shortly before describing him as a "hideously deformed figure". The article concludes by noting that a new, more adult *Zelda* adventure – what would become *Twilight Princess* – was in development and implored Nintendo not to include Tingle within it. "We hate Tingle, we want him dead, and we're not going to stand for him in another *Zelda* game," it read.

It's hard to imagine that Nintendo paid too much attention to the critics when creating *Twilight Princess* but the naysayers did in fact get their wish, and Tingle was promptly kicked out of Hyrule. In the June 2005 issue of *Electronic Gaming Monthly*, *Zelda* producer Eiji Aonuma said that he "found out some American people didn't like him very much" and opted not to include him in the game.

Tingle has been largely absent from the *Zelda* series ever since, save for a few affectionate

Next
He gave you the Tingle Tuner!
If you get stuck or need a quick hint,
connect a Game Boy Advance to your
Nintendo GameCube to talk to Tingle.
021

» [GameCube] The Tingle Tuner in *The Wind Waker* was one of a few attempts by Nintendo to find reasons for players to link their GameCube and Game Boy Advance together.

» *The Wind Waker* introduces Tingle's three brothers: Ankle, Knuckle and, er, David Jr.

» [N64] "Mr Fairy" has become Tingle's own affectionate nickname for Link.

» [DS] Seeing Tingle in his pyjamas is another level of adorable or creepy, depending on your general attitude toward the character.

DEFINING TRAITS
WHAT MAKES TINGLE SO... TINGLE
GREEN JUMPSUIT
Just like Link, Tingle favours the colour green. So much so, he wears it from top to bottom, even covering his ears.
FLAMBOYANT PERSONALITY
There's something very theatrical about the way Tingle behaves. This is a man who loves to be seen!
RIGHT HANDED
Tingle is right handed and uses that hand primarily to draw maps. Why do you need to know this? It's one of the answers to Keaton's quiz in *Majora's Mask*.
HERO OF TIME
Tingle is rarely seen without a clock hanging from his neck, which is fitting since he debuted in the time-twisting adventure *Majora's Mask*.
RED PANTS
Just like Superman, Tingle wears red pants over the top of his clothes. That's how you know he's the hero of the story.

TINGLE'S GAMES

EVERY APPEARANCE OF TINGLE SO FAR...

SUPER MARIO MAKER

Tingle has even appeared in a *Mario* game. Kinda. He's one of the costumes Mario can wear in the Wii U version of *Super Mario Maker.*

ZELDA: MAJORA'S MASK

Tingle made his debut in this suitably quirky *Zelda* game in which Link must repeat the same three days to stop a moon from destroying the world. Tingle doesn't seem too concerned about that though, he just wants to float around and sell maps.

ZELDA: ORACLE OF AGES

In his second appearance, Tingle made an unconventional jump from 3D to 2D on Game Boy Color. Though he gets a lot less screen time in this game, he's still seen doing what he does best: looking fabulous and providing Link with maps.

ZELDA: THE WIND WAKER

After rescuing Tingle from jail, Link receives the Tingle Tuner, which allowed players to connect their Game Boy Advance to the GameCube and have Tingle appear on the GBA screen to help out and provide useful info wherever Link goes. This feature was replaced on Wii U.

ZELDA: FOUR SWORDS ADVENTURES

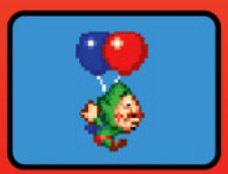
Tingle makes numerous appearances in this four-player co-op GameCube game. He'll try to steal Force Gems from the players if they don't collect them quickly, he operates the Tingle Tower where minigames can be played, and leaves stories in the world via the Tingle Times.

ZELDA: THE MINISH CAP

In this Link-shrinking adventure, Tingle and his brothers form a major part of the game's Kinstone-fusing sidequests, rewarding Link with secrets and bonus items the more stones he fuses. This is the last mainline *Zelda* game Tingle has appeared in so far.

FRESHLY-PICKED TINGLE'S ROSY RUPEELAND

Tingle's first solo adventure has virtually nothing to do with *Zelda*, aside from some reused sound effects. Instead, he spends the game gathering enormous amounts of money to please a suspicious guy called Uncle Rupee, who promises Tingle a heavenly life in Rupeeland.



TINGLE'S BALLOON FIGHT DS

This promotional game was given away exclusively to Club Nintendo members in Japan and sees Tingle star in a twin-screen remake of Nintendo's classic arcade game. Naturally, it plays just as well as the original game, only with a Tingle theme over the top. Which makes it the definitive version, obviously.

RIPENED TINGLE'S BALLOON TRIP OF LOVE

This Nintendo DS sequel to *Rupeeland* sees Tingle transported to a storybook world based on *The Wizard Of Oz* and features a point-and-click adventure-style gameplay. Though the game was only released in Japan, it received a fan translation in 2018.

TOO MUCH TINGLE

Released alongside *Ripened Tingle's Balloon Trip Of Love*, this DSiWare exclusive boasted a pack of Tingle-themed apps such as a calculator, a timer and a fortune teller. It's an inessential release, which is just as well because you can no longer download it.

HYRULE WARRIORS

Developer Team Ninja originally wanted to include Tingle in the main campaign of *Hyrule Warriors* but was denied. Instead it had to wait to include him as DLC. He does get the glory of appearing on the box of the 3DS version though!

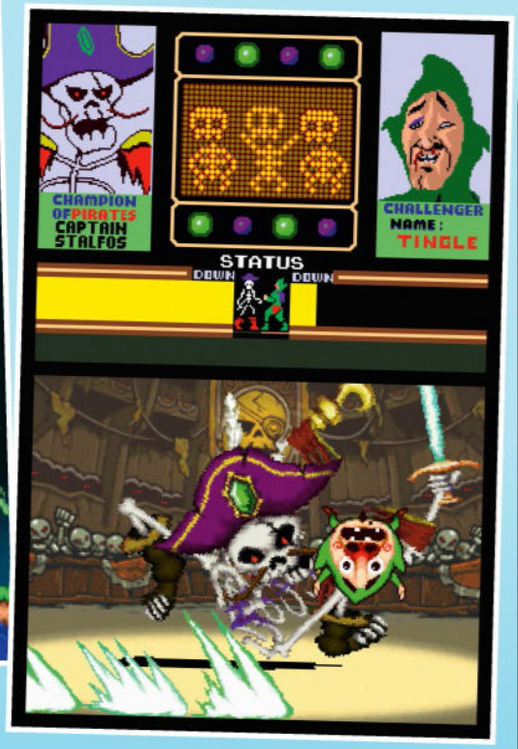
CADENCE OF HYRULE

In this *Zelda*-themed sequel to rhythm-action roguelike *Crypt Of The NecroDancer*, Tingle plays an integral role. Solve his puzzle and he'll give you the Tingle Tuner, which will help you navigate the bewildering Lost Woods.

SUPER SMASH BROS MELEE

Tingle makes a cameo appearance in the Great Bay stage, where his balloon can be used as a platform. Tingle has appeared in every subsequent *Smash Bros* game since, even as an Assist Trophy.

» [DS] *Tingle's Balloon Fight DS* is a great spin on the NES classic and now fetches a high price online.



» [DS] Tingle gets KO'd in a parody of *Punch Out!!* during *Freshly-Picked Tingle's Rosy Rupeeland.*

references. *Twilight Princess* features a character named Purlo, who Aonuma claims was created after he wondered what a realistic depiction of Tingle might look like. Later *Zelda* games feature small dolls or paintings of Tingle, while the DLC for *Breath Of The Wild* even allows Link to dress up in that unmistakable green jumpsuit. But Tingle himself would go unseen for years.

Tingle's story was far from over, however. In 2006, the year *Twilight Princess* released without him, he got a starring role in his own game. The incredibly titled *Freshly-Picked Tingle's Rosy Rupeeland* fully embraced the weird and the wonderful of all things Tingle. The Nintendo DS game was developed by Vanpool, a boutique Japanese developer comprising members of the *Moon: Remix RPG Adventure* team; a perfect choice for a totally unconventional adventure starring a quirky hero.

Rather than engage in traditional battles, for example, Tingle would get into cartoonish scraps with his adversaries, brawling in dust clouds while the player taps on the screen to encourage him. Similarly, rather than simply buying and selling key items, Tingle barters for information by offering Rupees to NPCs. Bid too low and they'd reject his offer, bid too high and he'd waste precious resources.

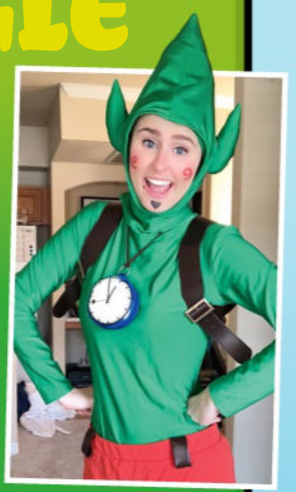
Rosy Rupeeland's collection of game mechanics could be described as quirky by some and downright obtuse by others. It wasn't for everyone, but then neither was Tingle. It seemed fitting, and with it a new era dawned for the character. No longer was he an unwanted guest in a beloved series, but a star in his own right, in a weird game that celebrated his quirks. Over the next few years, a wave of atypical Tingle vehicles followed. Vanpool made him the star of a point-and-click adventure retelling of *The Wizard Of Oz* (naturally) as well as a remake of *Balloon Fight*, of all things. It was a very brief golden age for Tingle fans, spanning just three years in which Nintendo allowed one of its most marginalised characters to enjoy his moment in the sun.

It couldn't last, of course. Tingle's games can't possibly have sold well enough to sustain a long-running series, but by this point he'd at least secured a very passionate cult following. One need only search the net for "Tingle cosplay" to see just how beloved the 35-year-old fairy has unironically become. He has a small but dedicated fanbase – including a fair few Americans – who don't love Tingle in spite of his weirdness, but because of it. They've embraced his flamboyance and they're not afraid to show it.

Although his era in starring roles has come to an end, perhaps a new era is beginning now that Nintendo can be assured not everyone does in fact hate him. In recent years, he's made a cameo appearance in rhythm action roguelike, *Cadence Of Hyrule*, and even a fully playable turn in *Hyrule Warriors*. It stands to reason that Nintendo has been paying attention to the fanbase, has watched the love for Tingle slowly grow and now feels more comfortable including him in Link's adventures once again. Perhaps he's even hiding somewhere in *The Legend Of Zelda: Tears Of The Kingdom*, waiting to sell Link a map, throw some glitter in the air and shout Kooloo-Limpah in celebration of his return. More likely he isn't, but if he is, let's maybe treat him a little kinder this time.

TALKING TINGLE

AN INTERVIEW WITH TINGLE COSPLAYER AND STREAMER MISS KYLIEE



What is it about Tingle that makes you want to cosplay as him?
Tingle isn't your normal *Zelda* character. Both his outfit and personality are goofy and silly. He always makes people laugh and smile and that is what I like to do as well! Plus, the costume is really comfortable too.

What's your first memory of Tingle?
It was in *Majora's Mask*. When I first met Tingle I found him to be hilarious. I love when he tells Link a little about himself… that he is a 35 year old and his father always tells him to grow up. Funnily enough he reminds me a lot of myself… I am almost 33 years old, I love fairies, and sometimes I feel I don't act my age!

Have you played any of his solo games?
I have briefly played *Freshly-Picked Tingle's Rosy Rupeeland*. It's where I discovered who Pinkle and Barkle were. The games even give some more backstory to Tingle beyond just that of the *Zelda* games. I plan to return to them because they were a lot of fun. It would be great if Nintendo ported them to Switch at some point.

Why do you think Tingle is so divisive among gamers, and do you think he'll ever return to the *Zelda* series?
In a world of Links, Zeldas, Ganons and so many more, Tingle is this goofy, silly character rather than an action-oriented one that may be saving (or destroying) the world. But honestly, that is what really makes me love him! I really hope he does return in *Tears Of The Kingdom* but I think it's more likely we'll see him in a new 2D top-down game instead.

How have fans reacted to your Tingle cosplay?
They absolutely loved it! My goal with the cosplay was to do something silly and goofy that fits with my brand and everyone adored it. It evolved from just a cosplay into stream alerts and emotes too! For me, Tingle has become synonymous with my stream. I even cosplayed as him at a nearby convention.

Sixaxis

» PLATFORM: PlayStation 3 **» YEAR:** 2006 **» COST:** £34.99 (launch), £40+ (today, boxed), £15+ (today, unboxed)

Sony went back to basics after unveiling an ill-received prototype controller at E3 2005, reverting to the familiar DualShock body for its standard PlayStation 3 pad. A new Home button sat in the centre of the device, the L2 and R2 buttons were converted into analogue triggers and the controller had motion-sensing capabilities from which it derived its name. It was the first wireless controller to be included as standard with a PlayStation system, using Bluetooth technology for connection, and featured a rechargeable battery that could be charged with a Mini-USB cable.

For all its new features, Sony controversially omitted rumble from the Sixaxis, claiming that "vibration itself interferes with the information detected by the sensor". Industry figures noted that Sony had recently lost a $90 million patent infringement lawsuit regarding the DualShock controllers, and that the motion-sensing Wii controller did feature vibration. Player feedback on the new controller was highly negative as a result, and the announcement of the DualShock 3 in 2007 was the death knell for the Sixaxis, which was discontinued in 2008.

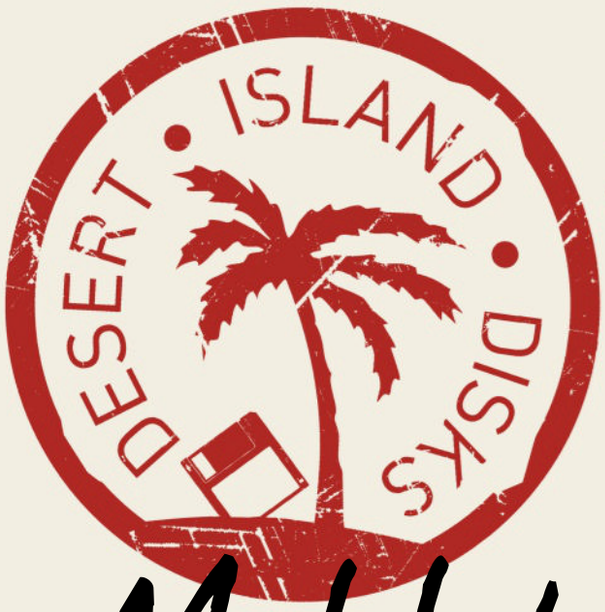
ESSENTIAL GAME
FLOWER

The unique features of the Sixaxis didn't really see an awful lot of support, and arguably the best game to use it was *Flower*, which arrived some time after the Sixaxis was replaced by the DualShock 3. The indie favourite puts you in control of the wind, with the motion sensing used for directional input and buttons used to control how hard the wind blows. Hardcore action gamers aren't likely to find much fun in it, but for those seeking a relaxing experience or an artistic game, it's absolutely perfect.

Sixaxis fact

■ Sony later introduced a dedicated motion-sensing controller in 2010, the PlayStation Move, which would ultimately become a key component of the PlayStation VR setup.

SUPPLIED BY
EVAN AMOS



Matt Householder

What cherished games would you take to the island?

From glaives and hacky sacks to skateboards and spatulas, Matt Householder's long and winding career has taken in some interesting turns

Words by Paul Drury

A great idea for a game can hit you at any time. And for Matt Householder, it almost literally did. "It was a Saturday morning in the summer of 1986 and my wife, Candi, and I were walking to a coffee shop for breakfast," recalls Matt, "when this kid on a skateboard rolls past us down the hill, making this horrible racket with the old hard wheels. My wife said, 'You should do a game with skateboarding in it' and I'm like, 'Woah! You're right! And we should have roller-skating and hacky sack and surfing… I think I designed the whole of *California Games* in the next 30 seconds."

Matt had always been open to inspiration from unexpected sources. After completing his degree in computer engineering at the University Of Michigan, he had joined the corporate world of Bell Labs in January 1980, working alongside 2,000 other programmers in a huge building in Naperville, Illinois. Unsurprisingly, he hated it, though stuck it out as the company promised to send him to grad school to complete a Masters degree and it was there he met the VP of engineering of Gaming Devices Inc (GDI), a small videogame division of the famous jukebox manufacturers, Seeburg.

"This guy starts talking to me at the end of class one day, telling me they had licensed a couple of videogames from Irem in Japan," says Matt. "He offered me a job and so the day I graduated, which would be August 1981, I quit Bell Labs, became a programmer at GDI and soon they flew me out to Japan!"

The games in question were *Red Alert*, a fairly standard shooter which cheerfully imagines how World War III might play out over various capital cities, and *Oli-Boo-Chu*, a maze game as bonkers as its title. Matt's first task was to 'tune' the latter's gameplay for the American market, which essentially meant tweaking the speed and other variables to make it harder for the more seasoned US arcade gamer. GDI also began developing a video poker game, which Matt had a hand in, but when that project folded, he was approached by a head-hunter, the perfectly named Joe Morocco, who set him up with an interview at Gottlieb's arcade division.

"I was actually interviewed alongside one of my colleagues from GDI, Chris Krubel," Matt explains, "by this big, imposing guy called Ron Waxman. He chain-smoked and the ash kept falling down his black turtleneck. His eyes kind of drilled into you, trying to tell if you could actually do what you said you could. He hired us both to do a game based on a film in production but told us if it wasn't ready for when the movie was released, we'd be out on our butts."

Matt and Chris immediately began designing *Krull*, a multi-screened arcade adventure based on the fantasy epic from Columbia Pictures. You can read the full story of the frenetic ten-month development of the game in **issue** 233 and the good news is that Matt did indeed meet the tight deadline and achieved that rare accolade of producing a game considerably better than the movie it was inspired by. The bad news is, the film was dire and flopped at the box office, which rather dampened interest in the coin-op from both arcade operators and players. "That whole period was really intense," sighs Matt. "Neither ▶

Trivia

Matt's colleague, Chris Brewer, created a pastiche of *Krull* called *Krawl*, which turned Prince Colwyn's army into girl guides and the beast became Bob Dobbs, deity of the Church Of The SubGenius.

It doesn't get much more Eighties than a California Games Hawaiian shirt...

FIRST JOB
Hospital TV rental technician

CURRENT JOB
Classic audio repairman

FAVOURITE FILM
Repo Man

FAVOURITE ALBUM
Cosmo's Factory by Creedence Clearwater Revival

FAVOURITE BOOK:
Moderan by David R Bunch

FIRST COMPUTER/CONSOLE
Polymorphic Systems Poly88

FAVOURITE COMPUTER/CONSOLE
C64

BESTSELLING PRODUCT:
Diablo II

BEST HOLIDAY
Visiting London, Bath and Glastonbury in 2007

WHO YOU WANT TO BE STRANDED WITH
My wife, Candi, and Andy Weir

"I think I designed the whole of California Games in about 30 seconds"
Matt Householder

212-068105103032068117103

SEX
M

NAME
Matt Householder

YEAR OF BIRTH
1955

PLACE OF BIRTH
Bowling Green, Ohio

BIOGRAPHY
Matt began his career making arcade titles at Gottlieb and went on to produce a vast range of PC and console titles for Epyx, Activision and Blizzard.

Praise For Matt

Here's what **Retro Gamer** has to say about Matt Householder's work...

Darran Jones
Although I never got to play *Krull* in the arcades, I did get to watch the film. I've spent way too much time playing both *Winter Games* and *California Games*, while *Diablo II* became something of an obsession when I received it as a birthday gift. Thanks, Matt.

Paul Drury
Modest, witty and with an impressive list of game credits to his name, Matt was a joy to chat to. Whether he's producing AAA titles or coding an addictive little puzzler, fun is always at the heart of the process. Plus he has a home arcade with *Defender*, *Robotron:2084* and *Computer Space* cabs. I'm trying to wangle an invite.

of us had built a game from scratch before and there was so much pressure to get it done on time. If the movie had been a hit, maybe it would have helped, but we could see the arcade business was declining around us and we just wanted to get *Krull* done before it vanished completely."

Like many arcade developers at that time, Matt decided the console market might offer a more stable working environment and swapped Gottlieb in the Midwest for Atari on the West Coast. He took a job as a programmer in the summer of 1983 and was tasked with converting another Irem coin-op title, *Moon Patrol*, to the ColecoVision. Sadly, his time at Atari proved as rocky as the lunar landscape your buggy trundles along in the game. "They sat me in a small office which had just enough space for a desk and a *Moon Patrol* cabinet and that was it," recalls Matt. "All I could do was play it. I got good enough to complete the Beginner's Course without fail and then got on to the Championship Course… but after a week, I hadn't written any code. Then I discovered God Mode in the operator's manual, which made you invincible! I could pause the game and make notes. I would literally use a ruler and measure the distance between rocks on the screen…"

> "We were hired to do a game based on Krull and were told if it wasn't ready for when the movie was released, we'd be out on our butts"
> Matt Householder

Matt's painstaking work yielded impressive results and he produced a very accurate and highly playable version of the game. It was all ready to go into production when Atari inconveniently began going bust and abruptly withdrew from publishing any new titles for the ColecoVision – though Matt fortuitously burned a few EPROM copies before all was lost (see Matt Patrol). He was briefly moved into Atari's coin-op division and then on to the home-computer team, where he was asked to assess a new chipset being developed by a small company called the Amiga Corporation. "Atari was considering acquiring them or licensing the chipset for a future computer," explains Matt. "I actually gave a little presentation to a bunch of engineers [at Atari] and made some pretty amazing statements about what the hardware was capable of. They were gobsmacked because they'd never heard of Amiga… or me! They were, like, 'Where did you come from?'"

Atari infamously passed on the Amiga project, which became Commodore's baby, but Matt ended up working on what was to become its main rival – the Atari ST. After the Tramiel family had bought the company and instigated sweeping changes, including extensive redundancies, Atari Corp put its energies into producing its own home computer and Matt had an important role in its development. "They kept me on as I was cheap," he smiles. "I was 'power without the price', which was actually one of Jack Tramiel's slogans for the ST. I worked on the operating system and did the GEM API line and polygon graphics primitives. That may sound like a very specialised thing but it's basically the foundation for the whole windows system [for the ST]. I'm very proud of that work… and I got paid my promised bonus this time!"

With his work on the new machine complete, Matt sought a return to making games, something he could see was not a priority for Atari under the Tramiels. He joined Epyx in the summer of 1985, as a producer rather than a programmer, managing projects as varied as *GI Joe* and *Barbie* for the C64 and Apple II to *Winter Games*, the development of which was often on thin ice. "Nobody internally wanted to work on it,"

The Gottlieb gang reunited at the Game Developers Conference, 1988 (L-R) Matt, Tim Skelly, David Thiel.

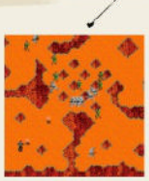
Matt and his wife Candi in 1985. Skateboard just out of shot.

Matt at Blizzard North. He'll have someone's eye out with that.

Timeline

1983

KRULL
■ **Year:** 1983
■ **Format:** Arcade
Matt's debut as a game designer and coder was his adaptation of the infamous sci-fi fantasy epic. Better than the film, which is damning with faint praise.



1985

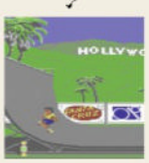
GI JOE
■ **Year:** 1985
■ **Format:** C64/Apple II
The all-American hero proved a sensible licence for an 8-bit action title. Matt handled production duties for this, alongside a title based on that other US icon, Barbie.

1985

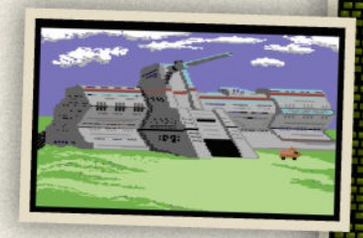
WINTER GAMES
■ **Year:** 1985
■ **Format:** Various
Summer Games established the formula, but this snowbound sequel showed considerable ambition, with its interpretation of such events as freestyle skating and ski jumping.

1987

CALIFORNIA GAMES
■ **Year:** 1987
■ **Format:** Various
Matt and his wife Candi came up with the concept for this hugely entertaining collection of sunny street and beach sports, which became a massive seller for Epyx.

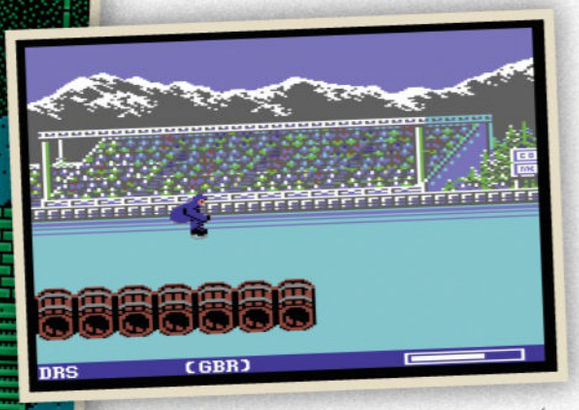


[C64] Winter Games: John Noakes' game of choice.



[C64] GI Joe – the grandaddy of the Army Men series.

[NES] Matt produced several console titles for Activision, including the polarity-shifting Rad Gravity.



[C64] World Games: Dickie Davies' game of choice.

Matt Patrol

How the ColecoVision port rode again

"I worked really hard on it and felt like I'd kept my end of the bargain," says Matt of his fine version of *Moon Patrol* for Mattel's console. "It was all done, even the manual. If Atari had just approved it for production, they would have issued me a big bonus cheque, like, a significant fraction of my annual salary. I made a few EPROM copies of a modded version I dubbed *Matt Patrol* and gave them to friends at Atari, including a colleague called Selma. She got fired before I could give it to her so I kept that one. I hadn't even done one for myself!" It was this sole surviving copy which became the basis of retro publisher CollectorVision Games finally releasing it in 2014 and you can still buy it at collectorvision.com

he explains. "Everyone was overworked and tired of the series and just refused. Epyx found an external developer and I had to do a lot of liaising, working out what needed to be done, evaluating the game, setting milestones… Richard and Elaine Ditton were doing pretty much all of it and David Thiel [formerly of Gottlieb] was working on it too. Then their boss stopped paying them and just disappeared. They bravely carried on, trying to fulfil their contract with us but with no money. I had to fly over and tell them they had to work harder, make it better and get it done sooner. I tried to do it in a nice way…"

Clearly Matt's charm eased the pain and *Winter Games* was delivered on time, achieving both critical and commercial success. By including less obvious sports, such as the gruelling biathlon and the trick-heavy hotdog skiing, it helped revitalise the series and paved the way for the inclusion of more left-field events in 1986's *World Games*, for which Matt acted as designer as well as producer. "Some of them were kind of jokes," he giggles. "Like the caber toss – this goofy event I'd seen on ABC TV's *Wide World Of Sport* as a kid. We were also inspired by *Monty Python's Flying Circus*. I mean, we even included *The Lumberjack Song* as the music for logrolling."

Matt continued this eclectic approach for *California Games*, embracing such unlikely events as Frisbee and BMX biking, which proved hugely popular with gamers in the late-Eighties, eager for new and gnarly challenges. "Basically, we invented the X Games,"

Householder on Householder

Matt picks his three favourite projects

MOON PATROL

I reverse-engineered the gameplay from the arcade original, wrote a multiplane scrolling game engine, drew all the art and designed the sound effects.

CALIFORNIA GAMES

The germ of the idea came from my wife, Candi, and in an epiphany, I sketched it all out in my head. Epyx instantly green-lighted it and gave me a big team, eager to work on it.

DIABLO II

I recruited and hired most of the developers, wrote most of the NPC quest dialogue, created the '!' NPC marker and managed localisation and voice casting.

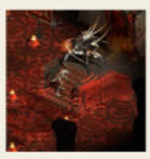
1991

CASCADE
■ **Year:** 1991
■ **Format:** PC
An enduring source of pride for Matt, this ingenious puzzler tasks you with matching up numbers on a set of tumbling dice to trigger satisfying, screen-clearing chain reactions.

1993

RANMA ½: HARD BATTLE
■ **Year:** 1993
■ **Format:** SNES
As a fan of manga, Matt was instrumental in bringing this surreal Japanese beat-'em-up to the USA. A real treat and definitely worth seeking out.

2000

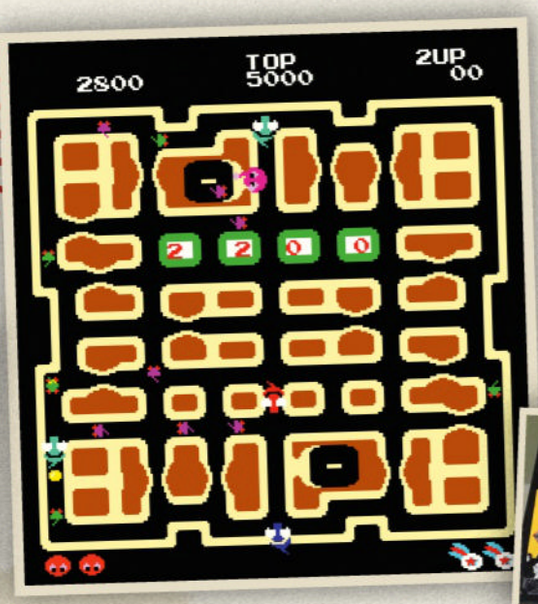


DIABLO II
■ **Year:** 2000
■ **Format:** PC/Mac
Matt worked on the early iterations and ports of Blizzard's long-running action RPG series. If you're new to the franchise, this sequel is a good starting point.

2013

KITCHEN SCRAMBLE
■ **Year:** 2013
■ **Format:** Facebook
Matt has had his hand in many fine casual games for mobiles and social-media platforms over the years and this frantic cook-'em-up is still being served up on modern phones.

[Atari ST] California Games caught a wave...



[Arcade] Oli-Boo-Chu is a weird mash-up of Pac-Man and Cheeky Mouse. It's worth seeking out!

Readers' Questions

Brian H: Did you ever have a go at some of the events you replicated in videogame form?
On a dare, I tried pole-vaulting once as a kid, but knocked the wind out of myself by missing the landing pad. Around 1965, I built my own skateboard from a piece of plywood and a narrow, metal roller-skate. I found I could ride okay on very smooth pavement but the tiniest rock was a huge hazard!

Merman: In the *Games* series, how did you come up with interesting and different control schemes, instead of just joystick waggling?
I wasn't the only one to come up with the control schemes, but I insisted on variety and that each scheme map well to the sport being simulated. For instance, the original biathlon controls did not require you to eject the spent shell and load the next one, as real rifles would, which I knew because I owned a bolt-action .22 when younger. I wanted that additional eject/load interaction for realism and added difficulty between shots on the targets.

Robert August de Meijer: Which games does Matt think have surpassed *Diablo II* in quality?
In my experience, none. But I could be wrong, since plenty of great games have shipped in the past 25 years.

Nick Moudios: Was it difficult getting the wave effect for surfing in *California Games*?
It required Jon Leupp, the surfing programmer, to develop a special animation tool and quite a bit of collaboration/iteration between him and the surfing artist, Suzie Greene. Its development was the most challenging of the events in *California Games*, technically and animation-wise.

Ray Povall: Anything you wish you had done differently in the game, Krull?
Oh, plenty! The Beast gameplay is quite underwhelming and should be completely redone. The running and speed of movement always bothered me, too. Actually, I've been thinking about redesigning all of the sub-games. I'd give the boulder game an *Asteroids* flavour: you'd throw the glaive to hit each large boulder and it would split into smaller pieces. In the Swamp, your army could be transformed by contact with Slayers into deadly frenemies, like in *Robotron*. Maybe Sony would even pay me to do this?!

> "World Games was partly inspired by Monty Python's Flying Circus. We even included The Lumberjack Song as the music for logrolling"
> Matt Householder

he grins. "We brought together this loose collection of rebellious, non-traditional, non-corporate sporting activities. In fact, in my initial pitch, I called it *Rad Sports*, not *California Games*, and everyone in the meeting said it was a great idea. The art department and the programmers really wanted to work on it."

The enthusiasm of the development team translated beautifully into the final product, which shone as brightly as the sun on Malibu Beach and became Epyx's best-selling title, shifting an estimated half-a-million units by 1989. It was ported to numerous systems while a sequel inevitably followed in 1990, this time adding bodyboarding and hang-gliding to the roster of extreme sports, but *California Games II* never matched the highs of the original. Matt moved on to producing games for the SNES, including *Lester The Unlikely* and the brilliantly bonkers beat-'em-up, *Ramna ½ : Hard Battle*, though he's especially proud of *Laptop Getaway*, an obscure 1991 compilation of DOS games. Or more specifically, one of the games, called *Cascade*. "All the games were designed for a laptop screen so had to be in black and white," Matt says. "I was thinking, 'OK, we can do dominoes and what else is in black and white? Dice!' I was driving to work one morning and I saw it in the sky – dice falling down, like *Tetris*, the numbers matching and boom, boom, boom, you're triggering a chain reaction! They disappear and the others would fall. I kind of invented *Candy Crush*..."

Trivia

While working on the Atari ST, Matt sneaked in a 16x16 pixel image of Bob Dobbs in the Atari 520ST operating system font. More power to his pipe!

Matt has a mischievous twinkle in his eye as he makes this bold claim but if you can track down a copy of *Cascade*, you'll recognise the monochrome roots of the ubiquitous match-3 puzzler. And besides, he would literally become devil's advocate in the latter half of the Nineties. Matt worked on the PlayStation conversion of *Diablo* and took on production duties for the sequel and the *Hellfire* expansion pack, as well as *Hellgate: London*. "I handled stuff around the product, so all the Blizzard North team had to worry about was developing the game," he explains. "Everything from approving strategy guides to reading novelisations of the games and commenting on any changes we were going to need. Years earlier, I'd introduced the musician, Matt Uelmen, to them and his audio in *Diablo* makes the fun gameplay even better."

The new millennium saw Matt leave behind the big teams of Blizzard and move into casual game development, both for mobiles and social-media platforms such as Facebook and MySpace. He designed and produced a range of titles, including *Mobsters*, *Sorority Life* and *Word Nerd* and is especially proud of *Kitchen Scramble*, created for Disney Interactive. "It was Facebook Game Of The Year in 2013," he smiles, "but Disney were kind of embarrassed because our little studio made a hit game and didn't have any of their IP in it. They sold it and I thought it was time for me to leave..."

Matt hasn't ruled out revisiting the *Kitchen Scramble* concept in a different guise or perhaps the tumbling dice of *Cascade*, and as *Krull* turns 40 this year, he is mulling over an update to his comedy pastiche *Krawl* as well as an artbook, in partnership with graphic artist Jeff Lee, chronicling the development of his first coin-op. Which reminds us, did he ever get round to finally watching the film, something he'd promised to do after our last interview?

"I failed to follow through on that," he admits. "I recently went over to the Digital Eclipse offices, who do a great job bringing retro games to modern platforms, and spoke to their president Mike Mika. When I told him I'd never seen *Krull*, he was flabbergasted! I think I can watch it now because there's nobody left who will be shocked if I told them that I hadn't seen it yet." ✱

Thanks to Martyn Carroll for additional help.

Matt's Desert Island Disks

The games that Matt simply couldn't live without

01 Space Invaders (ARCADE)
This was the first videogame I'd played that was a fully formed, high-quality, audio-visual gameplay experience from coin drop to game over. I first played it in 1979 in an arcade in Ann Arbor, Michigan, while working on, or actually, while not working on, my BSE in computer engineering.

02 Defender (ARCADE)
I first played this with my wife, when it was on test at Mother's Pinball in Mt Prospect, Illinois, while at my first game industry job at GDI.

03 Centipede (ARCADE)
I played this way too much in 1982. After a long session I went back to my cube and found I could not read my source code on the IBM PC screen. My eyes saw only the gaps between the text as channels for centipedes to rain down the screen…

04 Robotron: 2084 (ARCADE)
For the ambidextrous with excellent hand/eye co-ordination, you can't find a better game. I first played it in 1982 and immediately it became my favourite game, supplanting *Defender*.

05 Xybots (ARCADE)
Like *Centipede*, this is another great game by Ed Logg, and the first action/role-playing game I recall playing and enjoying.

06 Super Bomberman (SNES)
A great simultaneous-multiplayer console action/strategy game for the living room.

07 Diablo II (PC)
Though I worked too many long days, weeks, months and years on its development, once it shipped, it was great fun to play online with others in a true client-server system.

08 Word Streak (MOBILE)
I have always enjoyed languages, reading, writing and any kind of wordplay. In 2007, I discovered a *Boggle* clone by Zynga on MySpace, which evolved into *Word Streak*, and I have played nearly every day since.

Prince Of Persia: The Sands Of Time

THE FORGOTTEN SANDS

» RETROREVIVAL

» PLAYSTATION 2 » 2003 » UBISOFT MONTREAL

A friend of mine recently uploaded an episode of G4's show *X-Play* that she had appeared on in 2004, with the warning that it was not worth watching – a warning that I would soon regret ignoring. My breaking point came six minutes in when my friend was shouted down as she tried to propose that *The Legend Of Zelda: The Wind Waker* might have been worthwhile, after most of the guests and hosts had asserted that *Prince Of Persia: The Sands Of Time* was the only good game of 2003. Yes, the same year that *Wario Ware Inc*, *F-Zero GX*, *Beyond Good & Evil* and *Max Payne 2* came out.

Still, they weren't wrong about *Sands Of Time* being good. It was one of the first games I ever got for the PS2, and I thought it was amazing. The stages were masterfully designed and navigating them felt wonderful, a new high bar in 3D action adventure control. The time-reversing gimmick felt fresh, as did the way that the prince narrated the story and corrected himself when you died, and while the combat wasn't quite as solid it was always fun to vault over baddies. Given that the game already carried a notable name, I felt like it would be truly unforgettable.

Wrong again, Nick. During a discussion in which some friends and I were laughing about the idea of 2003 having a single good game, our resident young lad got the wrong end of the stick. He'd only heard of *Prince Of Persia: The Sands Of Time* because his dad had bought it when it was added to the Xbox backwards compatibility list, and had to ask if the game was actually any good or not. I certainly never expected to find a keen gamer who wasn't aware of such a great game, and I haven't felt so old since one of my younger sisters innocently asked, "What's *Street Fighter*?"

RETRORATED

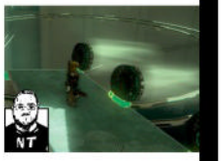
» Miraculously, we just about managed to put Zelda down long enough to write the reviews this month, and we also have reviews of Final Fantasy I-VI: Pixel Remaster, Evercade: Toaplan Arcade 2 and Nuclear Blaze for your reading pleasure

✱ PICKS OF THE MONTH

DARRAN

Evercade: Team17 Collection 1

No *Superfrog* is a shame, but there's still plenty of great stuff here and it's nice to see Amiga games on Evercade systems.



NICK

The Legend Of Zelda: Tears Of The Kingdom

I know I shouldn't play all night, but I've definitely seen the sun rise and thought, "Oh no, not again," while playing this.

» [Switch] Powerful enemies mean that visiting a Great Fairy for armour upgrades is essential.

retro GAMER SIZZLER

The Legend Of Zelda: Tears Of The Kingdom

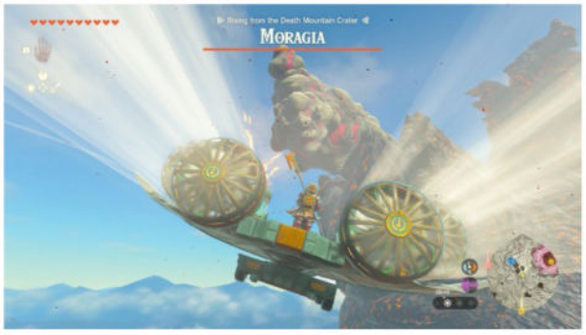
NOTHING TO CRY ABOUT

INFORMATION

- **FORMAT REVIEWED:** SWITCH
- **ALSO AVAILABLE :** NA
- **RELEASED:** OUT NOW
- **PRICE:** £59.99
- **PUBLISHER:** NINTENDO
- **DEVELOPER:** NINTENDO
- **PLAYERS:** 1

It's funny to think that for all of the success the *Zelda* series has had, very few of its games have been direct sequels. The story often starts afresh with a new Link and a new Zelda, and even in games like *Majora's Mask* where it doesn't, there's a major change of setting. But *The Legend Of Zelda: Tears Of The Kingdom* very directly builds on *Breath Of The Wild*, starting the story with Link fully powered and exploring beneath Hyrule Castle with Zelda – an expedition that naturally goes awry, leaving Link weakened and devoid of equipment. Those who didn't like the open-world *Zelda* formula in *Breath Of The Wild* won't like it here – it takes that game's map as a basis for its own, and features many of the same mechanics including temperature changes, breakable weapons and cooking. For those who played it and loved it, *Tears Of The Kingdom* does a great job of refreshing the world. As well as changes to the main map, there are now plenty of locations to visit in the sky as well as sprawling underground areas that are covered in Gloom, a mysterious dark substance that can reduce Link's heart capacity. The Divine Beasts are out and more traditional dungeons have also made a comeback, which will please many.

» [Switch] Any objects grabbed with Ultrahand can be freely positioned and rotated.

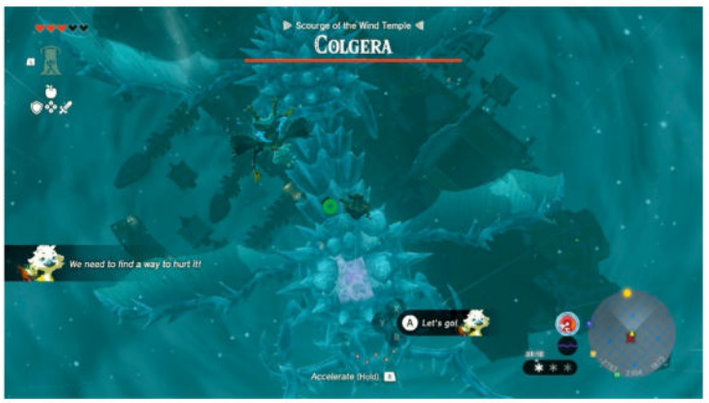


» [Switch] Zonai devices can be combined to improvise cool constructs like this plane.

BRIEF HISTORY

» *The Legend Of Zelda: Breath Of The Wild* launched for the Switch and Wii U in 2017, and introduced a new style of open-world gameplay for the series. The sequel, *Tears Of The Kingdom*, was announced in 2019 after plans for new elements become too large to incorporate as DLC.

» [Switch] The scale of the world is breathtaking, and that's just the surface layer.



» [Switch] The returning traditional dungeons naturally lead to some very satisfying boss encounters.

This time around, Link has some impressive new abilities with which to solve puzzles and generally cause chaos. Ultrahand is the most spectacular, as it allows you to grab various objects, manipulate them and stick them together. At first you'll just be constructing simple rafts, but with the use of the new Zonai devices – ancient technology including fans, rockets, flamethrowers and more – you'll be able to craft cars, grind rails like Tony Hawk and even go on aerial bombing raids. Amazingly, this is a very intuitive process too.

Ascend is quietly brilliant, allowing Link to travel upward through solid surfaces, Recall allows you to rewind time for a specific object and Fuse allows you to attach items to your equipment for different properties – rocks, monster parts, Zonai devices, even other weapons. We've seen people playing the early parts of the game and achieving the correct outcomes while using these abilities in totally different ways to us, and what's great is that in almost all cases the game just lets you do whatever works. With the right knowledge and skill it's even possible to beat the game in a couple of hours or less, but that would miss the point. Played as intended, the game will easily last you over 50 hours and the world is positively packed with interesting things to do, from the challenges in the shrines to neat little sidequests. Though *Tears Of The Kingdom* is excellent, we do have some minor nitpicks. The game restricts your actions so rarely that it's quite jarring when it does happen – for example, it's not possible to make a bridge out of wood and get a horse to walk on it. Climbing is still agonisingly slow, while the framerate can be erratic. It's also worth noting that enemies are often quite powerful and can take you out in just a couple of hits, even with a decent number of hearts and upgraded armour, and Gloom-tainted enemies can prevent you from healing if they hit you. This isn't a complaint as some will enjoy that challenge as much as we did, but if you struggle with combat this might not be for you.

Stacked up against everything the game has to offer, the flaws pale into insignificance. Creating a direct follow-up to *Breath Of The Wild* was a bold choice that left some fans worried that this would be 'glorified DLC' but Nintendo has come through in style with an absolute classic. *The Legend Of Zelda: Tears Of The Kingdom* frequently makes you feel clever, even like you're cheating, despite the fact that you're working entirely within the systems it gives you. It's a colossal game too – we could have doubled the size of the review and still only scratched the surface of what it has to offer, and it's hard to put down simply because there's always something tempting you to explore that little bit further. ✱

» [Switch] Partner characters have useful moves – we're using one as a cannon here.

» [Switch] The Gloom-tainted enemies underground will strip away your hearts until you return to the surface.

✱ WHY NOT TRY

▼ SOMETHING OLD
THE LEGEND OF ZELDA: OCARINA OF TIME

▼ SOMETHING NEW
THE LEGEND OF ZELDA: BREATH OF THE WILD

In a nutshell

In creating an open-world action adventure where the possibilities feel truly endless, Nintendo has delivered another all-time classic.

» Score **96%**

PICK OF THE MONTH

Final Fantasy I-VI: Pixel Remaster

» **System:** PS4 (version tested), Switch, PC » **Buy it for:** £64.99 » **Buy it from:** Online, retail

If you ever find yourself with plenty of time and no idea how to spend it, this collection of remastered RPG classics offers dozens of hours of fun for the devoted fan. If you're not quite as dedicated to the genre, you can pick up the games individually – the first two are £9.49 each and *III-VI* are £14.99 each. As the name of the collection suggests, these remasters aim to keep the retro aesthetic with brand-new pixel art, bringing the games much closer to one another visually – the original *Final Fantasy* has obviously had a huge upgrade, whereas casual fans of *Final Fantasy VI* might not initially notice much difference. Once you're into battle, you're more likely to notice the new animations for attacks and magic. Excellent newly arranged soundtracks are available, but you can switch to the original music if you like. A great effort has been made to make the games easier to get into – you can adjust the amount of experience and money that you gain from battles, or even turn off random battles completely. You may not wish to use these options for every game, but we'd recommend looking at them for the earlier games in particular, as they're pretty tough going.

Unfortunately, there are some disappointments to be found too – particularly when it comes to aspects of past releases of these games, such as the FMV sequences added to *Final Fantasy VI*, which aren't present in the *Pixel Remaster* versions. The CRT filter is also one of the very worst we've ever seen, with way too much blurring and fake scanlines that are wholly unconvincing in their appearance.

While these issues might disappoint fans of older releases, the *Pixel Remaster* versions are certainly very good and arguably the best way for a newcomer to experience the earlier games.

» Score **82%**

» [PS4] We're not exaggerating – the CRT filter for all six games really is that bad.

» [PS4] The new graphics put you in mind of the SNES, but aren't directly lifted from it.

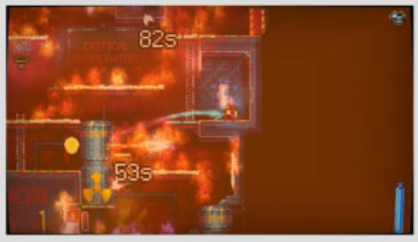
Evercade: Team17 Collection 1

» **System:** Evercade » **Buy it for:** £17.99
» **Buy it from:** Online, retail

The Amiga becomes the latest home computer to join the Evercade family and the decision to focus on the games of Team17 is a sound one. Omissions like *Worms* and *Superfrog* are weird but there's no denying that the mix of games on offer is a good showcase of the developer. *Body Blows* and *Full Contact* haven't aged too well, and we still can't warm to *Project X*, but the likes of *Qwak*, *ATR: All Terrain Racing* and the three *Alien Breed* games are great fun and easily worth the price of entry – there's even two okay sports games thrown in. Even games like *Body Blows* become more enjoyable when played on the VS and it's all backed up by some solid emulation.

DARRAN JONES

» Score **80%**



Nuclear Blaze

» **System:** PS4 (version tested), Switch, PC
» **Buy it for:** £12.99 » **Buy it from:** Online, retail

***Nuclear Blaze* casts you as a firefighter exploring an abandoned nuclear facility, trying to keep fires under control while also investigating just what happened there.** The game has been a real pleasant surprise – it controls nicely, the action is very well paced and the way that fires spread leads to situations of real urgency. There's a nice style to the pixel art, which isn't obviously trying to imitate any specific era, and the soundtrack fits the atmosphere extremely well. The only small knock against it is that it's not tremendously long, as it can be beaten in an evening, but it's very good fun while it lasts.

NICK THORPE

» Score **80%**

Evercade: Toaplan Arcade 2

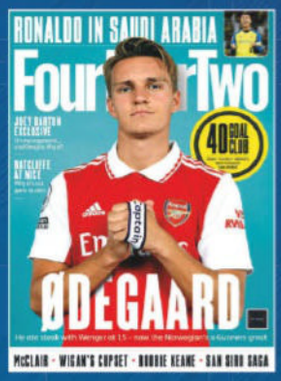
» **System:** Evercade » **Buy it for:** £17.99
» **Buy it from:** Online, retail

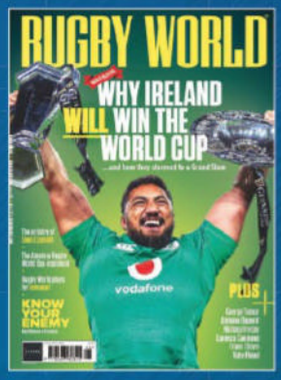
Clearly designed with the EXP in mind, *Toaplan Collection 2* has four of its seven games designed to work with that system's Tate mode. It's a great selection as well, with *Twin Cobra*, *Fire Shark* and *Twin Hawk* being brilliantly challenging shmups, while *Rally Bike* will have flown under the radar of many gamers. *Hellfire* is the sole horizontal blaster on offer, but it's a superb one, while *Wardner* and *Demon's World* are decent run-and-guns. Like *Team17 Collection 1* the emulation is of a very high quality and there's plenty of games to enjoy with a second player on the VS. It does suffer next to the Team17 cartridge due to a lack of variety, but there's no denying the quality here.

DARRAN JONES

» Score **81%**

FATHER'S DAY SUBSCRIPTION OFFER





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THE HOMEBREWER'S KIT

<YOUR MONTHLY GUIDE TO EVERYTHING HAPPENING IN THE HOMEBREW SCENE/>

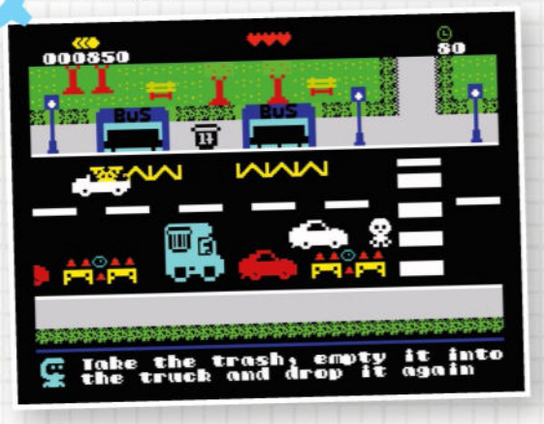
<INTRO> SEVERAL GAMES THIS MONTH ARE AVAILABLE AS A PHYSICAL RELEASE, WHICH TAKES TIME AND EFFORT. BRUXÓLICO COMES WITH A BOOK AND AUDIO FILES, AND OUR FEATURE TALKS TO PCNONO GAMES WHOSE SPECTRUM TAPES RAPIDLY SELL OUT. LOOKING FORWARD, NES FANS WILL WANT THE STORIED SWORD ON CARTRIDGE, AND MATT BENNION'S CRYPT OF DRACULA COULD ALSO GET A PHYSICAL RELEASE. SO PLAYERS WANTING MORE SHOULD SUPPORT THESE EFFORTS AND BUY THEM – PHYSICALLY OR DIGITALLY. </INTRO>

<!--- ANTONIO (LEFT) AND HIS BROTHER WITH A GIANT GAME BOY AT THE OXO MUSEO DEL VIDEOJUEGO MÁLAGA. --->

<MAIN HEADER>

THERE'S NONO LIMIT

<INTRO> PCNONO GAMES HAS BEEN MAKING BRILLIANT SPECTRUM TITLES, AND WE TALKED TO FOUNDER ANTONIO RÓMAN ABOUT THE SPANISH HOMEBREW GROUP </INTRO>



<!--- [ZX SPECTRUM] FANS OF MALCOLM EVANS' TRASHMAN WILL BE IN FAMILIAR TERRITORY WITH TRASHMAN CRISIS TIME. --->

<BODY> **"We could say that we have been related to videogames all our lives," Antonio Róman tells us, going on to say he started typing BASIC code from magazines into his Spectrum at the age of six with his thirteen-year-old brother.** "In 2015 we started making games for PC and Android. We always wanted to make a game for the Spectrum, so in 2019, we returned to the retro world with *Dead Zone*."

The brothers have a little help while making their games. "We use Jonathan Caudwell's AGD Native together with Sergio The Pope's La Perilla, and then Tiled, Game Maker, etc – it depends on the game," explains Antonio. "I (Nono) usually design the game, programming, sound and sometimes music, while my brother (Copy) is in charge of creating levels, graphics and testing. Then collaborators join – Sergio helps us with the most advanced code, Errazking with graphics, and Ozar with illustrations. And many others like Ariel, and Mr Rancio for other titles. The testers tend to change a lot and we try to make them have different profiles. A very good gamer, a more normal player, and someone quite basic as a player."

There have been physical releases of PCNONO titles, which have sold well. "We produced *Zooming Secretary*, but the truth is that it was a lot of work," admits Antonio. "But for *Tiny Crate*, we have shared work with a company that manufactures 'stereo-style' cassettes." Does Antonio have a favourite game? "It's hard to choose one, each of our games has something special, but if I must choose one, maybe *Code 112*? And *Tiny Crate* has particularly good mechanics."

The brothers are now working on a Game Boy Color title, using GBStudio. "It was our second game machine, and we wanted to do something new and different, with more colours and so on," Antonio explains. "Our goal is to have it finished by June this year. Watch our social networks or our website pcnono.es" So how easy was it to jump from Spectrum to Game Boy? "Thanks to the makers, the base of the programming is practically the same [The Z80 chip – Andrew]. We have noticed more changes in the management of colours and palettes. The Spectrum is an extremely limited machine; if you learn to create games for Spectrum, you can create games for any other system. I always recommend it as a study method."

So are any more games planned? "We do have more ideas and projects in the drawer to develop; not only Spectrum and Game Boy, but we also want to develop for other systems. We have to be patient and go one by one because it is a lot of work. Of course, as long as there are retro games, we would like to be able to release them in physical format and contribute so that these formats remain alive." </BODY>

<All the featured games can be purchased digitally from pcnonogames.itch.io />

EVIVA ESPAÑA!

<INTRO> OUR FAVOURITE PCNONO SPECTRUM GAMES </INTRO>

ADVENTURES CONTINUE

<Inspired by *Adventures Of Lolo* (NES), this block-pushing puzzler entered ZXDev 2021 and features a brilliant rendition of Daft Punk's *Around The World*./>

ZOOMING SECRETARY

<A clever demake of the Russian Mega Drive homebrew title also for ZXDev 2021. Rush around the office answering phones and dodging dodgy managers.../>

TINY CRATE

<With the first few levels acting as a tutorial, this action puzzler sees you throwing crates to climb around and escape the building site./>

PAINTBALL 2048

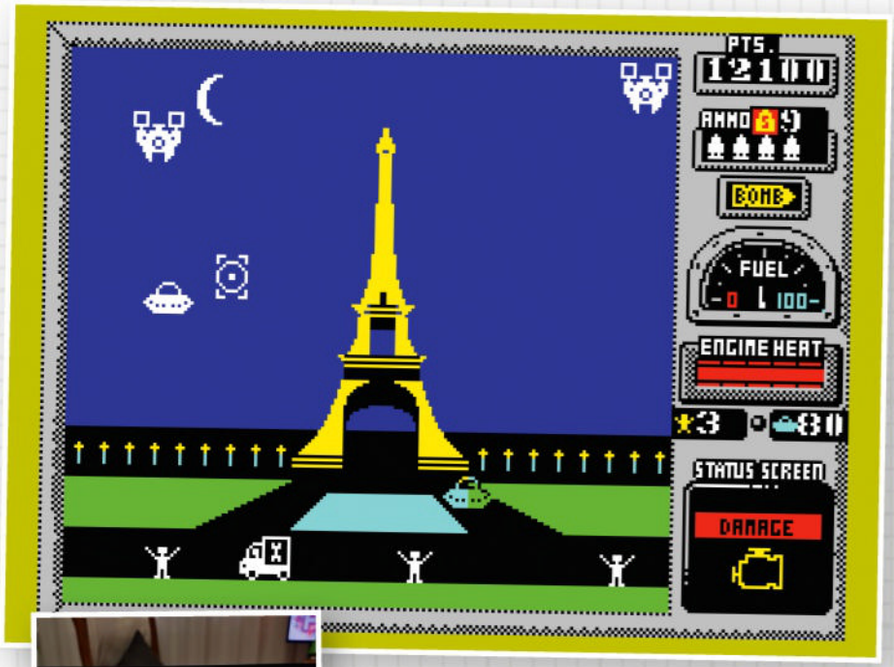
<Two players must capture the flag and fight off invading forces in this *Robotron:2084*-style game. A solo player must survive against hordes of enemies./>

TRASHMAN CRISIS TIME

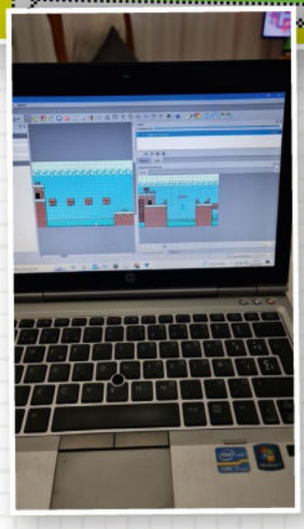
<Drawing on the Malcolm Evans classic *Trashman*, Andrés the rubbish collector must earn extra money to survive during the economic crisis./>

NEW GAMES NEEDED

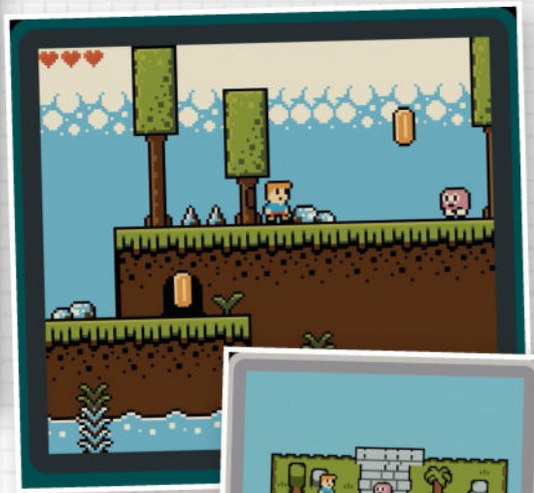
Our new email address is waiting for all your homebrew news, previews and more: **retrogamer@futurenet.com**

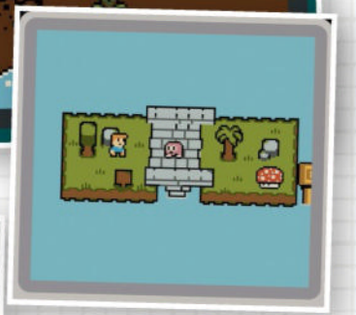


<!--- [ZX SPECTRUM] DEBUT SHOOT-'EM-UP DEAD ZONE SEES THE PLAYER PROTECTING FAMOUS MONUMENTS AROUND THE WORLD. --->



<!--- [PC] A GLIMPSE OF THE NEW GAME BOY TITLE BEING CREATED IN GRAPHICS EDITOR TILED. --->

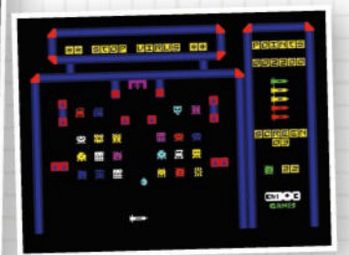




<!--- [GAME BOY COLOR] THE NEW GAME HAS SHINY COINS TO COLLECT. --->

<!--- [GAME BOY COLOR] ANOTHER GLIMPSE OF THE NEW GAME BOY TITLE CURRENTLY IN DEVELOPMENT. --->

<!--- [ZX SPECTRUM] CODE 112 IS ONE OF ANTONIO'S FAVOURITES SO FAR. --->



<!--- [ZX SPECTRUM] SHOOT-'EM-UP STOP VIRUS WAS INSPIRED BY THE PANDEMIC IN 2020. --->

NEWS BYTES

<INTRO> ALL THE LATEST NEWS, HANDILY ARRANGED BY FORMAT </INTRO>

Amiga: The deadline for AmiGameJam *Sword & Sorcery* has been put back to 1 August. More info at bit.ly/amigamejam

Atari 2600: No programming knowledge is needed for Haroldo-OKs VCS Game Maker, which uses Batari Basic and Javascript to create a working ROM. Discover it at bit.ly/vcs-gamemaker

C64: AGPX and Phobos created the platformer *News Stand*. Give it a try by visiting bit.ly/newsstand-c64

Game Boy Color: Incube8 Games opened orders for *Dango Dash* as a physical cartridge; the platform game sees you take on a clan of ninjas. Visit bit.ly/dangodash now.

Master System: Louis The Sega Nerd released the driving game *Monaco Master*, with a Game Gear version also available. Name your price and buy it from bit.ly/monacomaster

MSX2: Côté Gamers opened physical preorders for *SAK: Stab And Kill*, the excellent *Green Beret* clone. Hunt down a copy by swinging by bit.ly/sak-preorder

PICO-8: Paul Hammond's new conversion is Irem's arcade classic *Moon Patrol*. Give it a try by visiting bit.ly/moonpatrol-pico8

Various: Retro Programmers Inside hosted the Retro Snake Game Jam, attracting 13 entries on multiple formats. Find it at bit.ly/retro-snake-jam

VIC-20: Huffelduff's latest is *Murderlize All Humans!* Featuring sampled speech and Berzerk-like gameplay, it requires 16K memory expansion. More at bit.ly/murderlize-vic20

ZX81: Bukster Games released *BattleZXone*, a clever recreation of the classic Atari arcade game *Battlezone*. It's at bit.ly/battlezxone-zx81

ZX Spectrum: Sloanysoft's latest, *Janky Joe In Retro Hell* (top), pays tribute to classic games such as *Cybernoid*. Name your own price and grab it from bit.ly/jankyjoe

CHAMPION CODER

TEAM SWORD

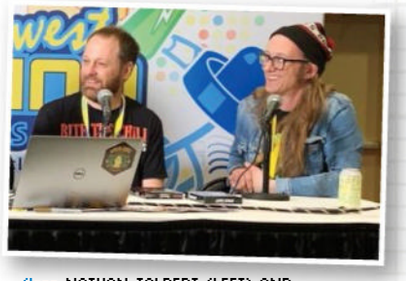
<INTRO> After meeting at the Midwest Gaming Classic, Nathan Tolbert (GAUAUU) and Jordan Davis (RaftRonaut) joined forces </INTRO>

<INFO FROM: America WEBSITE: bit.ly/storiedsword-nes FORMAT: NES PREVIOUS GAME: Super Homebrew War (NES) WORKING ON: The Storied Sword (NES) />

WHAT INSPIRED YOUR NEW GAME?

<**Nathan:** The goal was to capture the fast-paced frustrating challenge of *Ninja Gaiden* but with elements of Sunsoft's *Batman* mixed in (like using wall-jump physics and specific enemy mechanics)./>

<**Jordan:** I've been bingeing classic swashbuckling and high-fantasy films looking for inspiration for the artwork. Errol Flynn's *Robin Hood, The 7th Voyage Of Sinbad, Jason And The Argonauts* and *Jack The Giant Killer* have been playing on repeat. The result is a fun mish-mash of influences./>



<!--- Nathan Tolbert (left) and Jordan Davis (right) taking part in the MGC podcast in 2021. --->

WHAT ARE THE UNIQUE FEATURES?

<**Nathan:** Jordan had an idea early on to make our enemies more interesting: instead of them all being faceless clones, we have different heads that are applied. We also eschewed the traditionally limited lives and game over cycle. For games like this, the player just wants to keep trying until they succeed, so we just let the player infinitely try again from the beginning of the level. The game features two playable characters, so balancing both characters' abilities has been a fun part of the development process./>

WILL THE STORIED SWORD HAVE A PHYSICAL RELEASE?

<**Jordan:** The cartridge release is the main goal, as fans of the console. I'm hoping to put some care into the physical packaging to reinforce our storybook theme. There is a lot of work that goes into it, but when it's done well it adds so much more to the tactile experience of owning an NES game in a box./>

DO YOU HAVE A RELEASE DATE?

<**Nathan:** We're hoping that it will be finished later this calendar year, with four of the six worlds mostly complete. But the final boss fight might take us some effort! />

<**Jordan:** We have some terrific testers helping us iron out our designs. We're both really motivated to finish the game, but we want to take the time to ensure that we're creating a balanced challenge. We want our final boss encounter to be something special. />

<!--- [NES] playable character Cedric as he appears in the cutscenes. --->

<!--- [NES] taking on a large boss character. --->

<!--- [NES] female character Orchid will play differently from Cedric. --->

DATA BURST

BRUXÓLICO

<INFO FORMAT: ZX Spectrum CREDITS: Amaweks PRICE: $10 digital download (includes PDF book & audio files), free demo available WEB: bit.ly/bruxolico-zx />

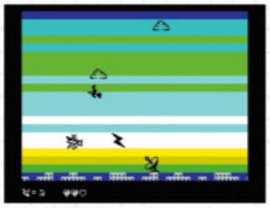
<BODY> **After the brilliant *TCQ* (85%, RG238), this new game from Amaweks comes with a 40-page book and accompanying audio files (in English and Portuguese) to give the full narrative.** *Bruxólico*'s inspiration comes from Portuguese folklore and the work of Franklin Cascaes, a Brazilian anthropologist who studied the culture of the Azores.

From the depths of a bottomless well, the Ghost-Ox emerges. You control this supernatural creature, which is armed with a powerful kick and you must seek out hearts to replenish your vitality. Consuming papaya seeds gives you the ability to spit projectiles for a brief time, while collecting the Ghost-Ox Doll awards you with an extra life.

The key to *Bruxólico* is that it's well-made, has colourful graphics and offers plenty of variety across its five levels (which are spread across three tapes). There is flick-screen platforming, boss battles where you must work out how to damage your foe, scrolling stages and even a horizontal shoot-'em-up stage. Great presentation adds to the atmosphere, with certain screens from the game doubling up as illustrations for the accompanying book. Our one concern is *Bruxólico*'s longevity as certain stages are very easy to beat and there's little incentive to return to them once completed. The end result is another intriguing and original Spectrum game that has certainly been worth waiting for. </BODY>

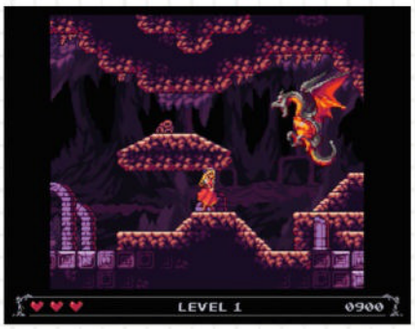
SCORE: **85%**

<!--- [ZX Spectrum] You play as the Ghost-Ox, a mythical, supernatural creature that eats hearts. --->



NEW GAMES NEEDED

Our new email address is waiting for all your homebrew news, previews and more: **retrogamer@futurenet.com**



<!--- [AMIGA] MARIA ENCOUNTERS A VERY DANGEROUS-LOOKING DRAGON. RUN! --->

<!--- [AMIGA] IT'S A TOUGH GAME, BUT MARIA IS UP FOR THE CHALLENGE. --->

MARIA RENARD'S REVENGE

<INFO FORMAT: AMIGA 1200/CD32 WITH 1MB FAST RAM, AMIGA500 MINI CREDITS: Z-TEAM PRICE: NAME YOUR OWN PRICE WEB: BIT.LY/MARIA-AMIGA />

<BODY> **Inspired by Konami's earlier *Castlevania* games, Z-Team has built this homage with the Scorpion Engine (see RG236).** Maria Renard is distantly related to the Belmont clan and armed with magic doves (other animals can be picked up, including a white cat that follows platforms). Just like her relatives, she must take on the infamous vampire. Travelling through four tough levels filled with enemies, Maria fights skeletons and large dragons, dodges fireballs and lava, and must avoid landing on deadly spikes. Fluid animation and detailed backgrounds work well, with a clever touch being the darkness if you accidentally take out a lamp. The difficulty is high, but this is classic platforming and great fun. Amiga fans should definitely check this out. </BODY>

SCORE: 86%

<!--- [AMSTRAD CPC] A WELL-TIMED KICK WILL KNOCK THIS THUG OFF HIS BIKE. --->

<!--- [AMSTRAD CPC] ENEMIES WILL QUICKLY SURROUND YOU IF YOU'RE CARELESS. --->

RENEGADE RELOADED

<INFO FORMAT: AMSTRAD CPC (128K REQUIRED) CREDITS: GECO AND TOTO PRICE: FREE DOWNLOAD WEB: BIT.LY/RENEGADE-RELOADED-CPC />

<BODY> **Ocean's brilliant Amstrad conversion of arcade hit *Renegade* excelled – this updated version manages to improve on it.** New graphics and scrolling levels really give the feel of the arcade original, with in-game music adding to the flavour. And new combat moves are in too – running (double-tap left or right) lets you punch and kick at speed to give more versatility in combat. The classic gameplay feels fluid and there are plenty of neat extras including invulnerability and built-in red blood. An extremely well-made update of an Amstrad classic. </BODY>

SCORE: 88%

PROCESSING

<INTRO> THE STAKES ARE HIGH IN MATT BENNION'S INCOMING MEGA DRIVE DUNGEON CRAWLER CRYPT OF DRACULA </INTRO>

<BODY> **"It started as a simple port of the ZX Spectrum game *Tomb Of Dracula*, which I played a lot as a kid," explains Matt about his new game.** "The engine takes inspiration from *Shining In The Darkness* and *Doom*; puzzle mechanics take inspiration from RPGs and *Chip's Challenge*, while *Castlevania* and *Resident Evil* are an inspiration too." Matt tells us *Crypt Of Dracula* is created with Visual Studio Code together with Stephane Dallongeville's Sega Genesis Development Kit (SGDK). Currently, the dungeons are randomly generated, but Matt is thinking of switching to pre-generated levels.

"I'd love to get a physical release sorted," Matt tells us. "I'm self-funding most of the work myself now and these things take time, unfortunately." The development team includes Daniel '108 Stars' Horváth (*Pier Solar*) drawing the in-game graphics, Anders 'Zable' Tegengren (*Pier Solar*) providing music and Luis Martins (*Paprium*) drawing the title screen and cutscenes. You can see the game in action at bit.ly/dracula-preview Matt is also busy on two other Mega Drive games, including *Chords* (a tribute to Hideo Kojima's *Snatcher*), which we will cover soon. </BODY>

<!--- [MEGA DRIVE] SILVER STAKES FUNCTION AS YOUR MONSTER-SLAYING WEAPON AND ARE VALUABLE TREASURES, TOO. --->

HOT TOPIC

RETROBATES MULL OVER THE SCENE'S MOST INTRIGUING ISSUES

» [Arcade] If an arcade stick can't survive the Darran Jones Factor, it's not worth the cash.

TIME TO ACCESSORISE

Looking back at our favourite peripherals

DARRAN JONES

NICK THORPE

TIM EMPEY

After a night of looking up how to adapt an LCD-compatible lightgun for classic hardware, Nick got to thinking about his favourite specialised controllers. Going down the resulting rabbit hole, he ended up ambushing the team with the following question…

NICK

So what's the finest peripheral in the history of gaming, and why is it the Power Glove?

TIM

Because it's so bad.

DARRAN

I can still remember seeing the Power Glove in *The Wizard* and desperately wanting one of my own. The Power Glove may have been pretty rubbish for playing games, but it did look cool. But not as cool as the Master System's 3-D Glasses.

NICK

They really do look cool, in that very Eighties way. I always wanted them as a kid and finally got them ten years ago, and you know what? They actually lived up to my expectations.

TIM

The Master System had 3D Glasses? Were they just squares of red and green see-through plastic?

DARRAN

I think they were active shutter glasses with a LCD blanking screen over each eye and they would match the refresh rate of the TV. These are my own words and not something I just copied as Nick explained it to us. So Tim, what peripheral tends to stick out in your mind?

TIM

The couple of arcade sticks I used to have. Switching from pad to stick was difficult, but it really paid off when playing *Street Fighter III*.

NICK

I think they're basically a necessity when Darran plays it, only the most durable stick can handle his Hugo technique.

DARRAN

Funnily enough I recently bought an arcade stick for my Switch and PC. It's a Hori Arcade Pro.V Hayabusa Fight Stick, but I use it to play shmups. Did anyone happen to have a dance mat?

TIM

Nope, I've never even played *Dance Dance Revolution*.

NICK

I have a couple for the PlayStation and I think they're both broken, those soft mats were pretty dreadful. I did once play *WWF Smackdown! 2* on them with a friend though, that was a good laugh. Did either of you ever use a peripheral in a weird way like that?

DARRAN

I played *Soulcalibur* with the Dreamcast Fishing Controller around a friend's house once. What about you, Tim?

TIM

Eh, no actually. I'm far too sensible/boring to do that.

DARRAN

So what about lightguns, Tim?

> "I'm a big fan of lightgun games. I've got a G-Con 45 for various PlayStation games"
> DARRAN JONES

» We'd feel bad making Darran go to the loft, so here's that *Steel Battalion* controller.

» We can almost picture a younger Tim blasting away at ducks with one of these.

» We don't want to imagine old plastic instruments as landfill, but sadly we're able to.

There must be some lightgun games you like.

TIM

There was an old lightgun game in Barry's Amusements in Portrush in the Eighties, but I wasn't allowed to play it. I played a bit of *Duck Hunt* in Boots in Belfast though – gun pressed firmly against the screen!

DARRAN

I'm a big fan of lightgun games. I've got a G-Con 45 for various PlayStation games, a gun for the Saturn and Dreamcast and loads of games for the Wii, with The *House Of The Dead Overkill* and *Dead Space: Extraction* being particular favourites. Are you a big fan of lightgun games, Nick?

NICK

Yeah, I'm a bit of a fanatic – I have quite a few lightguns, including a pair of G-Con 45s just for competitive *Point Blank*. I went through a phase of playing *Time Crisis II* daily, and the Wii port of *Ghost Squad* has probably saved me hundreds of pounds. Speaking of money, have you ever bought an extravagant controller?

TIM

No, but I gave away the *Resident Evil 4* Chainsaw controller, which I hear goes for a high price these days.

DARRAN

Ouch, that's always a gutter, Tim. Also Nick, I imagine you asked this knowing full well that I used to keep my *Steel Battalion* controller in one of our office cupboards. It's in my loft now due to lack of space.

TIM

There was that period when *Guitar Hero* and *Rock Band* came out with their own peripherals. I remember that.

» Tim's generosity highlights that we can only store so many bulky controllers.

DARRAN

Oh yes, that was huge. I remember getting *Rock Band* and Melanie was not impressed that I'd spent so much money on it but she soon changed her tune (ho ho) when the weekends came around and we'd rock out with our friends.

NICK

We had a full band together at university, which was awesome until my housemate broke up with the guy who owned all the stuff. I cheaped out when I got my own kit – I went for the PS2 versions because they were being sold for next to nothing, and only have the guitar.

TIM

I shared a house with two other games journalists, so of course the *Guitar Hero* guitars arrived. Then they multiplied. Then *Rock Band* was released, so even more guitars and drums and mic stands. The place was coming down with them! They're all in a tip now I imagine.

DARRAN

Sounds like they're as dead as the franchises they were bought for. What a shame.

» [Wii] Nick claims he saved money, but he probably just spent it on other arcade games instead.

» [PlayStation] If you need a reason to have two guns, *Point Blank* is as good as they come.

» [Master System] Playing *Zaxxon 3-D* without the glasses as a kid inspired Nick to hunt high and low for a pair of his own.

READERS REACT

Which peripherals left an impression on you?

Videopolis
The first *Guitar Hero* on PS2 will always be special. Aside from *Beatmania* (which was about as niche as they come, despite a PAL PlayStation release), there was nothing else like it. Bought a copy when visiting my best mate in Scotland, don't think we left the house all week.

Andy Davidson
Namco's NeGcon was amazing. Twisting it to have analogue steering was a genius idea, and once you got the hang of it going back to traditional controls was impossible. This was THE way to play the *Ridge Racer* games.

unangbangkay
Attempting to aim the old Nintendo Super Scope as advertised is just self-torture for under-tens. Still get phantom shoulder cramps thinking about trying to play *Terminator 2: Judgment Day* with it.

Travis Prebble
Can't forget dance pads. From the thin and flimsy to arcade replicas, *Dance Dance Revolution* and *Pump It Up* fans had to have something to jump on. I went as far as owning a Cobalt Flux hard pad and creating arcade-style modular control boxes for them.

Quest 64 Official
Densha De Go! train controller for the N64. There's a lot of *Densha De Go* controllers, but this system is my favourite and this game got zero international push. Good times though.

Filippo Dambreaux
The *Steel Battalion* controller. Considering it was built for one game only, it's so expensive and something pretty unique.

Llama King
The Justifier for *Lethal Enforcers* on the Mega-CD. Made me feel like I was Dirty Harry and I just loved it.

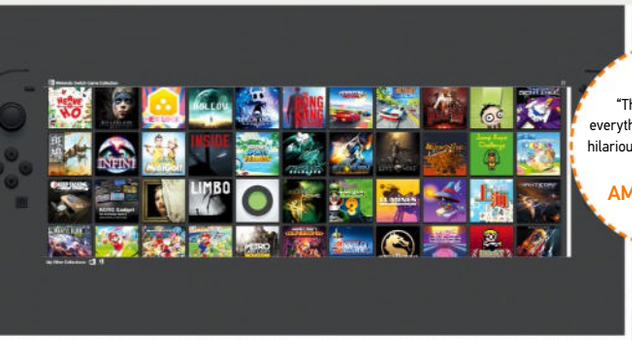
James Potter
The Dreamcast Fishing Controller is good for party games. Play *Crazy Taxi* with it and you'll have an epic time.

Ken Harrison
I really liked the *DJ Hero* turntable and how it worked with the game. Shame it was never held in the same regard as the *Guitar Hero* titles.

Daniel Betts
How could anyone forget the *Donkey Konga* bongo controllers? The games were already fun but the bongos really elevated the experience.

COLLECTOR'S CORNER

READERS TAKE US THROUGH **THE RETRO KEYHOLE**



MDK
"This PC game has everything: it's fun, fast and hilarious. I'm still waiting for a remaster."
AMOUNT PAID: $25

LEMMINGS
"*Lemmings* on C64? Impossible, but yet it exists and it's badass. It blew my brain back in 1994."
AMOUNT PAID: €22

FROM BIG BOX TO BIG WEBSITE

Meet the collector who shares his collection online

We've spoken to many collectors in the past who have used spreadsheets as a way to track their collections, but Benjamin Wimmer has taken things one step further. "I wanted something visual that would allow me to compare covers and editions more easily," he tells us. "With that in mind, I started by photographing and then scanning my boxes. As the number of photo albums grew, the idea of presenting them on a website emerged."

That collection can be found at bigboxcollection.com and it's filled with incredible scans of Benjamin's impressive big box collection, as well as the games he has picked up for Wii and Switch (the latter of which is all digital). As you might expect, keeping on top of such a project can be quite time consuming. "There are only a couple of small tasks needed for creating a virtual version: scanning the box, editing the scans, and adding the game's details to my database," Benjamin says. "The problem is that my spare time is limited, and side projects like the upcoming bigboxbook.com eat up more hours than anticipated, so there are always a pile of not-yet scanned/uploaded boxes on my desk."

Every collection starts somewhere and Benjamin's began with a copy of *Castle Master* on the C64, which was acquired in the late-Eighties. "It was my first game packaged in a cardboard box and it felt magical compared to the budget Mastertronic cassette cases that I usually picked up," Benjamin says. "We were spoiled back then with all the manuals, maps and other extras that were thrown into these big boxes. No other platform matched this level of goodies that made the games spill into the real world during the Nineties."

Benjamin decided to put his collection into storage in the summer of 2000 due to big box variants disappearing and a general focus on digital games, but a physical release of *C64anabalt* on C64 in 2012 reignited his interest and he began tracking down the coveted games he never got to play on release. "Long story short, here I am with a shelf of around 700 boxed games for various computer systems released between 1982 to 2021," he proudly tells us.

When he's not seeking out big box games to add to his collection, Benjamin also has an interest in Nintendo's Wii. "It was a true revolution for me," he tells us. Never comfortable with the dual-stick controllers that so many other consoles used, Benjamin found the Wii's approach refreshing, saying, "It allowed for a more comfortable and very precise way of playing." It also led to Benjamin picking up many games for the system, from *Zack & Wiki* and *Endless Ocean* to *No More Heroes* and *Resident Evil 4*.

While Benjamin is unsure why the Wii is suddenly becoming popular, "The Wii got a lot of hate during its time and was skipped and belittled by many gamers, developers, as well as the press," he's convinced you can still create a great collection if you follow some useful tips. "Patience is key," he says. "Set yourself a budget per title and/or month and take a break from time to time. Also, share your collection with other retro gamers, like the fantastic Big Box PC Game Collectors group on Facebook."

BIO

NAME:
Benjamin Wimmer

LOCATION:
Vienna, Austria

ESTIMATED VALUE OF COLLECTION:
+3 Nerdiness

FAVOURITE SYSTEM:
PC

FAVOURITE GAME:
Elder Scrolls: Daggerfall

TWITTER:
@3DBigBoxGames

Got an impressive collection of your own? Contact us at:
RetroGamerUK @RetroGamer_Mag retrogamer@futurenet.com

DAGGERFALL: THE ELDER SCROLLS CHAPTER 2 (PREVIEW)
"A tough to find PC demo of my all-time favourite game with a stunning box."
AMOUNT PAID: €99

DEAD SPACE: EXTRACTION
"A very intense on-rails shooter that shows what the Wii's capable of. A perfect game bought on day one."
AMOUNT PAID: £29

JEWEL IN THE CROWN

LAST NINJA 2 (US RELEASE)
■ "One of the best games on C64 and one of the best covers of all time. It took me ages to find."
PAID: €70

BARGAIN HUNT

Your guide to the rising world of retro prices

THE COVER STAR

OUTRUN 2

Despite being an Xbox exclusive, *OutRun 2* remains relatively cheap and costs roughly **£12.** *OutRun 2006: Coast 2 Coast* on Xbox is a different story, with PAL prices starting at **£75!**

MAYHEM IN MONSTERLAND

Original disk versions of this excellent game can go as high as **£140.** Alternatively, an official reprint is available via Psytronic Software for **£19.99.**

STAR PARODIER

Prices for this charming shooter start at **£54** and top out at **£95.** You'll find versions by PCEWorks which are far cheaper but they're reproductions and not authentic, so keep that in mind.

MAGIC POCKETS

Atari ST versions of *Magic Pockets* sell complete for around the **£20** mark, while the Archimedes version reaches **£50.** The Amiga version falls somewhere in the middle.

CLOCKWORK KNIGHT

PAL versions of *Clockwork Knight* tend to hit **£40** complete, with US editions reaching **£50.** The Japanese version is usually around the **£20** mark.

MIRROR'S EDGE

Even if you don't consider it retro you'll not want to miss out on this excellent game. The Xbox 360 and PS3 versions are both available for **£1.**

FRESHLY-PICKED TINGLE'S ROSY RUPEELAND

£95 seems to be the going rate for a complete copy of Tingle's DS adventure. No US release keeps the price high.

ZERO WING

Toaplan's excellent Mega Drive conversion is rising in price. PAL copies can reach **£50,** while Japanese copies can go as high as **£100.**

HOW MUCH?!

ELIMINATE DOWN

Considered a grail by many Mega Drive owners, *Eliminate Down* continues to fetch outrageous prices. A copy recently sold for **£1,249.99.** If you ever see this in the wild, snap it up!

Prices correct at time of print

MY RETRO LIFE

PERSONAL STORIES ABOUT OUR **SHARED PASSION**

IT ONLY DOES EVERYTHING

Darran investigates the Xbox Series X

I've spoken in the past about my compulsion for collecting and how it's most likely (in my case at least) tied to my mental health. I've been struggling quite a bit again lately and when I go down these dark pits of despair I typically do one of two things: gorge myself on food or buy videogames. They're admittedly short term fixes to a bigger, underlying problem, which I've now started to address, but they can consume me.

My latest videogame bender has focussed not necessarily on the Xbox Series X, but certainly around it. I've been picking up a fair few PS3 games recently, and as much as I enjoy the console, certain games run poorly on it. Take *Driver: San Francisco* for example. I've enjoyed my time playing it, but it's plagued with VSync issues that really pulls me out of the game. *Silent Hill: Downpour* is another title I recently returned to but its framerate is so poor I had to give up on it.

I sold both copies and instead bought them on Xbox 360 to play on the Xbox Series X and the difference is huge. *Driver: San Francisco* plays just as well as it did on PS3 without all the ugly tearing, while *Silent Hill: Downpour*'s technical issues are largely cleared up and it pretty much hits a consistent 30fps. I had such a good experience with it that I completed it. This isn't a new thing of course (I mentioned how well games like *Earth Defence Force 2017* ran on the console back in issue 217) but it reminded me how Microsoft's powerful console has given older games a new lease of life.

My Xbox 360 collection is already pretty comprehensive and something that I don't plan on expanding on, so I started investigating the Xbox One library. This was also at the same time that I discovered Vinted. Granted, I was aware of its existence as I have two daughters that have often used it to buy or sell clothes, but I had no idea it had begun to sell other items.

Discovering Vinted has led to me buying several games, and some have been bargains. In the space of two weeks I've picked up *Red Dead Redemption II* for £5, *Call Of Duty: Black Ops III* for £2, *Tony Hawk's Pro Skater 1 + 2* for £6, *Far Cry: Primal* for £4 and *New Super Mario Bros Deluxe* on Switch for £26. Granted, there's postage on top, but I never include that in an overall purchase and many were significantly cheaper than CEX.

Of course, that's not to say I didn't visit CEX either and an old credit note I had been sitting on led to *Deadpool*, *Titanfall 2* and *Recore*, the latter of which I've just completed. I've also grabbed *Mad Max* after hearing high praise about it on the rather excellent *The Back Page* podcast, so that's been added to the to-play list as well.

> "Discovering Vinted has led to me buying several games"
>
> **DARRAN JONES**

I think one of the most impressive things about the Xbox Series X is its ability to let you access the libraries of three older Xboxes. Admittedly, there are only around 60 original Xbox games that are compatible, but some of them are among my favourites and the likes of *Panzer Dragoon Orta* and *Prince Of Persia: The Sands Of Time* look absolutely incredible. The libraries open up as you get to the newer systems and I currently have just over 70 Xbox 360 games that are backwards compatible and either run at higher framerates or a consistent 30fps, which can make a huge difference to how they play. My Xbox One and Xbox Series X library is far smaller but that's fine, I've picked up more than enough games recently to keep me busy.

It's hard to stay focussed around such bargains though, and I've noticed that there's a lot of interesting games you can buy on the Xbox One for under £5. *The Evil Within 1* and *2*, *Metal Gear Solid V: The Phantom Pain*, *Gears Of War 4*, *Mirror's Edge: Catalyst*, *XCOM 2* and *Halo Wars 2* all fall within this category and I wonder if the focus on Games Pass has caused a lot of these games to plummet in value. We may never know, but what I do know is that I've had a great time picking up games for virtually nothing and I'm sure others will too. ✱

FIVE FOR UNDER A FIVER

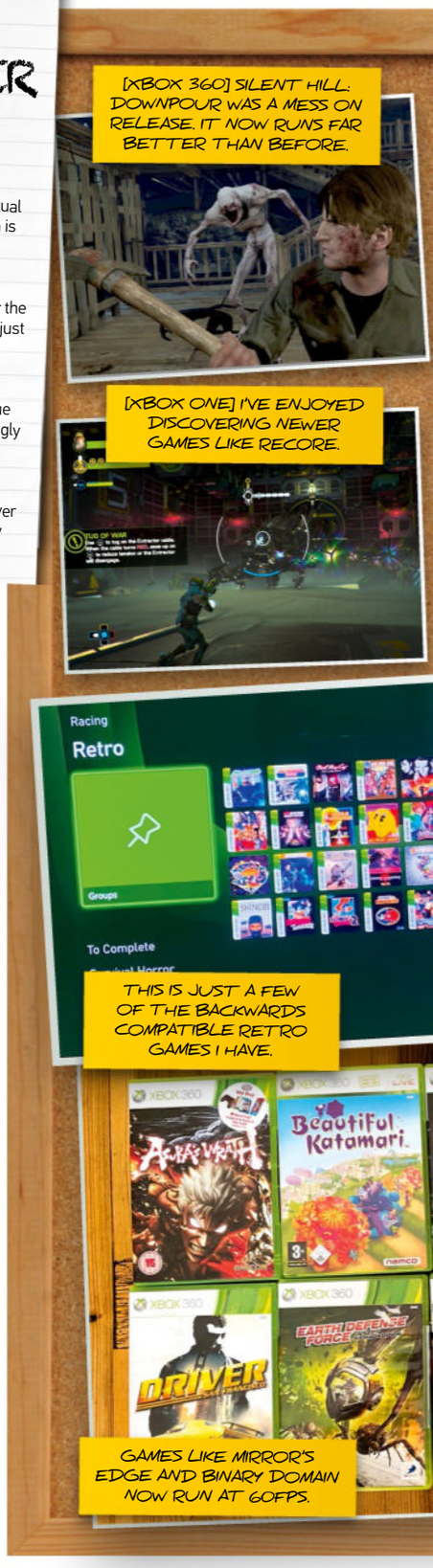
CHEAP GAMES TO ENJOY ON XBOX SERIES X

CHILD OF EDEN
This glorious-looking Xbox 360 game is a spiritual successor to *Rez*. CEX sells it for just £1, which is superb value for money.

PURE
A truly excellent and underrated arcade racer for the Xbox 360, which is immense value for money at just £2. To miss it is to miss out.

RARE REPLAY
Thirty Rare games for £30 was exceptional value for money when it debuted, it's now mind-blowingly good value at just £4.

TITANFALL 2
Respawn's sequel had one of the best single-player FPS campaigns of its generation. You can enjoy playing through it for a paltry £2.


[XBOX 360] SILENT HILL: DOWNPOUR WAS A MESS ON RELEASE. IT NOW RUNS FAR BETTER THAN BEFORE.
[XBOX ONE] I'VE ENJOYED DISCOVERING NEWER GAMES LIKE RECORE.
Racing
Retro
Groups
To Complete
THIS IS JUST A FEW OF THE BACKWARDS COMPATIBLE RETRO GAMES I HAVE.
Beautiful Katamari
DRIVER
EARTH DEFENCE FORCE
GAMES LIKE MIRROR'S EDGE AND BINARY DOMAIN NOW RUN AT 60FPS.

I HAVE A FEW PROMOS FOR THE XBOX ONE. THAT DISHONORED 2 IS STILL SEALED!
[XBOX 360] SPEC OPS: THE LINE IS ANOTHER GREAT XBOX 360 TITLE I RECENTLY ENJOYED PLAYING THROUGH.
[XBOX 360] THE FRAMERATE BOOST FEATURE HAS REALLY HELPED GAMES LIKE SONIC GENERATIONS.
SOME OF THE RECENT XBOX ONE GAMES I'VE PICKED UP. MAD MAX IS GREAT VALUE AT JUST £6.
[XBOX ONE] A LOT OF THE LEGO GAMES ARE BACKWARDS COMPATIBLE ON XBOX SERIES X. THIS IS LEGO JURASSIC WORLD.

MODERN COLLECTORS

Readers reveal the newer systems they collect for

Chris Jowett
I currently have a full collection for the Evercade. It's a great and cheap system to collect for!

David Sheppard
Nintendo Switch. I made the somewhat fortunate decision to finally pick one up just before the COVID pandemic hit. It has now become my favourite console since the GameCube and I have close to 100 physical games now.

Oven Chips
I'm currently building up a 360 collection as they're criminally cheap for the most part. Plenty of variety in the library and the enhanced backwards compatibility from the new systems is always a plus.

Big Chris
I moved from PC to Xbox One purely because of the cost of a new PC and now have quite a few physical games for it. I also have a PSP I still have games for but at the minute it's the Evercade I use the most.

KitsuneNight
I halfheartedly 'collect' for the original Xbox and Xbox 360.

ACO
Switch and Xbox One. Switch slightly more as I have imported a little more, twice from Japan (*Capcom Beat 'Em Up Bundle*, *Okami*) and one from Europe (*Klonoa*). Plus, the orders from Limited Run Games as well.

Gear_Project
Would it be weird to say that I gave up collecting physical games a while ago? I still have my older libraries of games, but... nowadays I get almost everything digital on a terabyte hard drive (either for PC or PS4).

Baiteh
PS2, cheap and plentiful in the main.

Eidoleus
I collect only my favourite games for PS5, PS4, Xbox Series X, and Switch. So not too many.

Portable Roundup
I collect for Evercade, Vita and Switch, anything else is mostly digital for me!

MAILBAG

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STAR LETTER

LOST GAMES

Dear **Retro Gamer**,
This isn't my first letter, but it is my most sincere. Like many I'm sure, I re-read past issues on a daily basis and I came across Darran's very honest, but humble approach on how gaming can help with mental health in issue 237. I could appreciate everything said and identified just as much.

Something though, that I still curse to this day for many reasons, was my addiction to alcohol. Though I'm coming up to three years sober, from strength, focus, support and by applying the tools of SMART (Self Management And Recovery Training), I'm reminded often when reading past issues of your magazine of the many titles I sold to pay for my sickness.

Games I will never be able to afford again. Saturn gems like *Panzer Dragoon Saga* and *Keio Flying Squadron 2* and my impeccably well-kept SNES collection. But part of recovery is letting the past go and it hasn't been easy, but I'm definitely in a better place mentally, physically, spiritually and that is the only reason I'm grateful for my addiction, as I am now the best version of myself and will continue to become better each day. I'm also getting better access to my son, who loves his games too.

I've still got a decent collection of games and consoles, but every now and then, I can't help but think of the ones I let go for a pointless bottle, but I then remind myself of the games I still have and that it was gaming that distracted me through the first 90 days of recovery. Escapism at its best, when things were at their worst. That is all. Apologies for the length. Keep up the constantly good work and are we any closer to a huge insight on the Sega Saturn yet?

Take care all and stay safe,
Darren Nicholls

» Here are just a few of the games Darren traded in. As he mentioned, some are now very expensive.

Thanks for sharing such an honest account with us Darren and we're delighted to hear how well you're doing. Nick has actually been discussing a potential hardware-based feature about the Saturn, so you've got that to look forward to. Have a book to read while you wait.

» We featured The Retro Hunter in issue 229, which includes an interview with owner Ally Hogg.

RETRO HUNTERS

Dear **Retro Gamer**,
We love travelling around the UK to find independent retro shops and, like Henry Petrie in issue 246's Mailbag section, we also would love to see a feature about independent retro shops across the UK.

We've visited Retro World in Derby and would like to put forward another two stores that are local to us in Essex for a future article hopefully. Both stores are amazing and have a wide range of stock. They are both run by genuinely nice guys. One is The Retro Hunter, 1172 London Road, Leigh On Sea, Essex; run by Ally. The other is Miso Retro Games, Unit 54 at The Village at Barleylands, Barleylands Road; run by Luke.

We can't praise the stores and them enough, so it is definitely worth checking them out. We really hope they can be featured and that the article goes ahead so we can find more new places to visit ourselves.

Keep up the fab work!
Angie and Rich Taylor, Essex

Hi Angie and Rich, thanks so much for reaching out to us. We've interviewed Ally in a past issue and have ordered a few things from him ourselves, but this is the first we've heard about Miso Retro Games. Thanks for bringing Luke's shop to our attention.

PRESIDENT WEEVIL

Dear **Retro Gamer**,
The recent *Resident Evil* issue, coupled with a recent playthrough of classic *Resident Evil 2* on the Dreamcast (VGA box, CRT monitor) had me asking the question I've never really found the answer to. There's still a lot of popularity to the classic *Resident Evil* trilogy, myself and many others go to some length to get the best image quality and there's even fan projects going so far as to

» [PlayStation] Thomas is a big fan of the original *Resident Evil* trilogy and would love to see them on modern systems.

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completely upscale the games. The question is, given *Resident Evil*'s popularity, why hasn't that original trilogy been given a modern release?

Regards,

Thomas Marshall

Thanks for writing in, Thomas. With regards to why the original versions aren't available in some upscaled form we don't really have an answer. All three PlayStation games are on PS3 but we can't think of anything newer (unless you want to subscribe to Sony's PlayStation Plus service for *Resident Evil: Director's Cut*).

TECHNICAL TOPICS

Dear **Retro Gamer**,

I'm wondering if you've ever covered more technical topics, such as the constant anti-piracy war that was waged in the Eighties, from the goddamn awful Lenslok to the deliberate addition of bad or 'fuzzy' sectors on disks, to playing back longer blocks than

» Don't Copy That Floppy saw Tim Clare discussing anti-piracy measures all the way back in issue 83.

usual on tape (Atari 8-bit *Chop Suey* did that, if I recall correctly). This kind of thing has always fascinated me. Once I learned 68000 Assembly language on the ST, I attempted to remove the copy protection from a couple of games and I was surprised at how easy it was. The hacked games were never distributed as it was for my own curiosity. While **Retro Gamer** is a gaming magazine, it would be nice to see something a little more technical from time to time for those of us who did tinker around with the programming guts of these machines.

David Wyn Davies

While we've not covered these topics regularly, there is a look at the cracking scene in issue 248 and we covered anti-piracy measures in issue 83. It's certainly a subject we should revisit. Thanks for the suggestion, David.

DISCUSSED THIS MONTH

Nick's new setup

It has taken him a long time to put together, but Nick finally has all of his consoles easily accessible and he couldn't be happier. Darran's been quizzing him about his new units and it turns out he's using KALLAX 2x2s with optional glass shelves that he's fitted himself. Darran was a little sceptical about ordering some in case his original Xbox didn't fix, but Nick assures him that it does and there's at least two fingers of space spare.

Your say

» [PS2] You clearly love *OutRun 2006: Coast 2 Coast* as much as we do. What great taste we all have.

Every month, Retro Gamer asks a question on social media and prints the best replies. This month we wanted to know…

What's your favourite OutRun game?

PHorV™

My favourite version is the 3DS version of the original *Out Run* game. The stereoscopic 3D actually makes you feel like you are driving into the horizon. There's a wealth of additions like cabinet noises, screen tilts, new songs, Arcade mode and more!

Paul B

I feel like it's blasphemy to say you didn't like any of the originals but I didn't get on with them at all. The PSP version of *OutRun 2006: Coast 2 Coast* was the first one I actually enjoyed.

Chris Brownsell

OutRun 2, for me, was the arcade driving game perfected. Just you, your car, and the open road ahead of you winding through beautiful and varied environments. *OutRun 2 SP* (and by extension *OutRun 2006*) took what *OutRun 2* already built and simply expanded on it.

Alister Almond

OutRun 2 on the Xbox. Mainly due to my first time playing it was at the Edinburgh Games Festival which was like a mini E3. Had no idea it was a thing, walked up to the booth and instantly fell in love with it after my first go.

David Fisher

OutRun 2 SP. Fast paced, colourful, great soundtrack, and oozing style. The *Super Deluxe* cab puts it in pole position for me.

Mark Elliott

My heart says the original 1986 sit-down arcade version, but my head says that *OutRun 2006: Coast 2 Coast* is a better game.

Jonathan Cooper

During a cross-Canada long-distance relationship *OutRun 2* was at the airport arcade. I played it every few weeks for ten months when flying out and mastered it. The girl didn't last but I still love this game.

John Miller

OutRun 2. I've always thought of it as being the last proper arcade game.

Tom Fisher

I absolutely loved *OutRun 2*. But the Saturn port of the original is the one, assuming you can't find a sit-down cab!

Marcus

Absolutely *OutRun 2006* on PSP, although I play it in my Vita. A complete gem of a game with so much to do!

Trewq

OutRunners on the Mega Drive. Not as good as the arcade but for a game starved 14 year old it kept me occupied over the Christmas holidays.

Martin Irving

I played the stand-up arcade cabinet in 2002, real fun, but I do enjoy *OutRun 2006: Coast 2 Coast* from time to time.

retro GAMER

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CBC

Mirror's Edge

FRAMERATE MATTERS

RETROREVIVAL

» XBOX 360 » 2008 » DICE

We first covered *Mirror's Edge* as a Future Classic all the way back in issue 109 and I'm delighted to say it still holds up today. I'd always been fascinated by DICE's game when it was first announced, because there simply wasn't anything like it at the time of its release.

Although it utilised a first-person viewpoint like so many of DICE's other games, the aim of *Mirror's Edge* was to avoid combat rather than actively seek it out.

It turns out that avoidance is surprisingly easy because your avatar Faith Connors is a Runner, effectively a skilled parkour courier who is surprisingly adept at delivering sensitive information. She soon finds herself in trouble when her sister is framed for murder and Faith must solve the true killer's identity with enemy forces hot on her trail.

You'll do a lot of running in *Mirror's Edge* and as you pick up more momentum it becomes easier to traverse the strikingly stark futuristic world that DICE has created. Environments are painted with distinctive minimalistic hues, and your attention is cleverly drawn to nearby exits and ramps thanks to Faith's Runner Vision which handily paints useful landmarks red.

Sure you can disarm enemies and grab their weapons, but Faith is a terrible shot and they'll only slow her down or hamper her impressive movement. Equally hampering is the fact that for all its visual splendour, the original Xbox 360 game ran at 30fps with a fair few performance drops and screen tearing that would often pull me out of the game. Thankfully, it now runs at 60fps on Xbox Series X and it's transformational, as Faith feels so much more responsive than she did in 2008. While I don't like to bang on about framerates in videogames, it really does matter for some titles and genres and when you've experienced DICE's beautifully designed world at 60fps it's very, very hard to go back to anything else.

ENDGAME

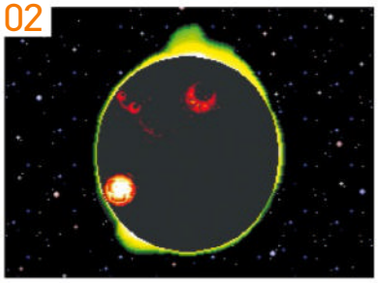
R-TYPE COMPLETE CD

» The brilliant PC Engine conversion of *R-Type* had one flaw, at least in Japan – it was split across two HuCards. This CD-ROM version didn't just unify the two halves of the game, but added a rather spiffy CD soundtrack and some brand-new ending scenes, complete with voice acting. Let's take a look at one of them now, shall we?

01

» You've managed to defeat the Bydo menace, and now it's time to escape the rapidly disintegrating base. Pushing the R-9A Arrowhead to its absolute limit, it's going incredibly fast – but maybe not fast enough.

02



» Your compatriots can only watch from afar as the Bydo's dark star begins to explode, as the effects of your battle with the final boss take their toll on the structure. It's going to be a tight escape, for sure.

03

» The chief wants to know the status of the R-9A ships that went out to battle the Bydo. Less than twenty are detected, and the chief has to ask if your one – the prototype – is one of the battle-scarred survivors.

04

» Alas, it is not. You might have taken out the Bydo and saved humanity, but in the process you made the ultimate sacrifice. The chief takes a brief moment to mourn you and your co-pilot before ordering the shuttle to retrieve the R-9As, as the dark star vanishes.

05

» Finally, you get a view of the distraught chief and the aftermath of the war against the alien menace, a rather bleak ending. Do you have to play a harder difficulty for a better ending? No, actually – the normal and easy endings are far more triumphant.

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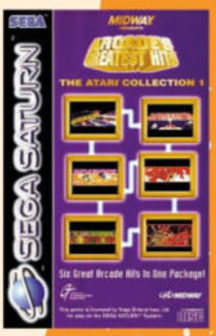

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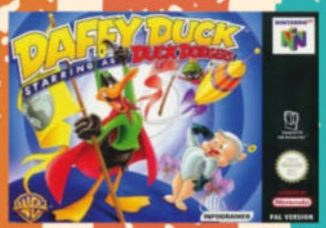

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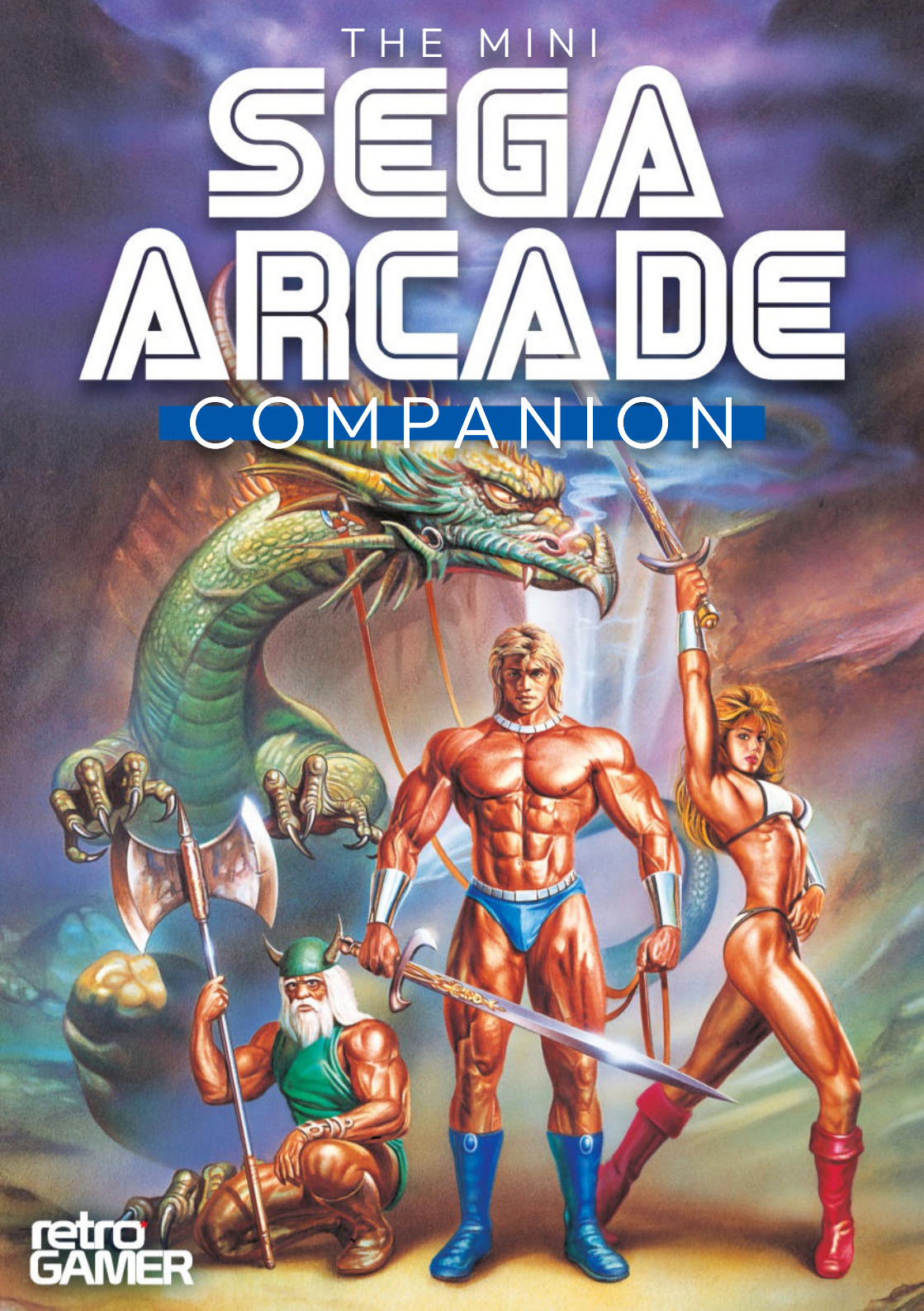

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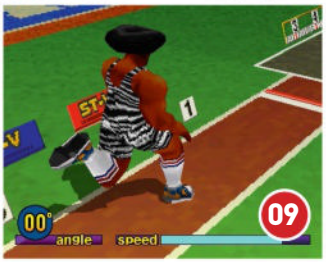
SEGA FOREVER

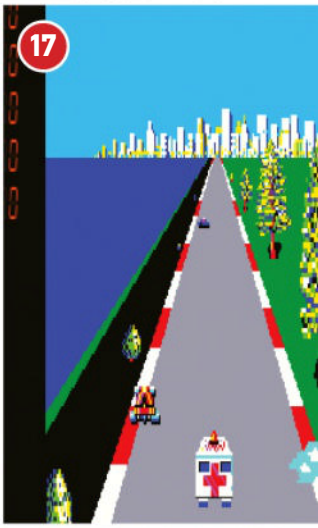
I'll always associate Sega with the arcades of the Eighties and Nineties. I virtually lived in arcades during this golden period and I'd always find myself drawn to Sega's games. Instantly recognisable thanks to using cutting-edge techniques like Super Scaler technology, and often featuring bright, vivid colour schemes, Sega's games instantly stood out and would always capture my attention.

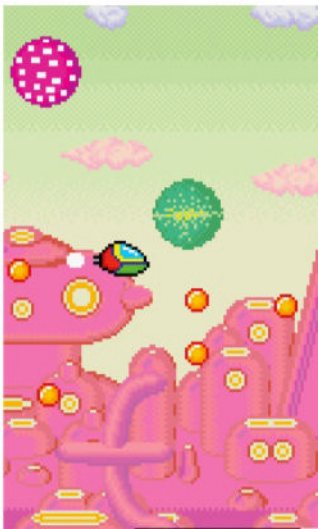
This makes sense, as Sega had had plenty of time to hone its craft, having started off creating electro-mechanical games like *Killer Shark* and *Rifleman*, before moving on to more conventional arcade games like *Monaco GP* and *Heavyweight Champ* during the Seventies.

This book, however, will be largely focussing on the Eighties and Nineties, a period when Sega truly began to move away from the pack thanks to innovating in the 3D arms race and perfecting genres like the arcade racer. It was a truly exciting time to be a gamer and fierce competition for your cash meant companies like Sega were always finding new ways to wow you.

So here we have gathered 40 of Sega's most interesting games, from epic Super Scaler marvels like *Out Run* and *Space Harrier* to more esoteric fare like *Dynamite Dux* and *Congo Bongo*. How many of them do you remember?







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RAD MOBILE

OUT RUN 1986

THE DRIVE OF YOUR LIFE

Originally inspired by the popular Burt Reynolds' movie *The Cannonball Run,* creator Yu Suzuki changed his mind when he realised just how empty the roads of America were. He instead headed to Europe, and the end result was *Out Run*, one of the most impressive racers of the Eighties thanks to its stunning visuals, gorgeous soundtrack and multiple routes that resulted in five distinct endings. Yu Suzuki's game continued to build on Sega's Super Scaler technology, and proved a hot property on home computers and consoles too. Sadly, all of US Gold's home-computer ports were largely terrible, failing to capture the speed and excitement of the arcade original. Numerous sequels and spin-offs have appeared over the years, with the most recent being an excellent Switch offering by M2 for its Sega Ages range.

» [Arcade] *Out Run* made exceptional use of Sega's Super Scaler technology to create exciting-looking locations to drive through.

» [Arcade] Inspired by a tour of Europe, *Out Run*'s scenery still looks absolutely fantastic today. We'd love to drive there.

CRAFTING THE ULTIMATE RIDE

OUT RUN'S YU SUZUKI LOOKS BACK AT HIS EXCEPTIONAL ARCADE RACER

How did you collect data for *Out Run*?
"Because of the 'transcontinental' concept, I felt that I should first actually follow such a course myself, collecting information with a video camera, a still camera and other equipment. I started out from Frankfurt, where I hired a rent-a-car, and I installed a video camera on the car. I drove around Monaco and Monte Carlo, along the mountain roads of Switzerland, stopping in hotels in Milan, Venice and Rome, collecting data for a fortnight. I have many happy memories of that trip."

Why choose a Ferrari Testarossa as *Out-Run*'s main vehicle?
"Naturally I was yearning for Ferraris. Above all, the most talked-about car of the time was the 12-cylinder Ferrari Testarossa. The first time I saw the car was in Monaco, and I was really moved by its beauty – I thought, 'There is no choice: this is the only one'. There are many other charming Ferraris, but memory problems made it impossible to include them in the game… So we decided that the player's car should be the 12-cylinder Testarossa."

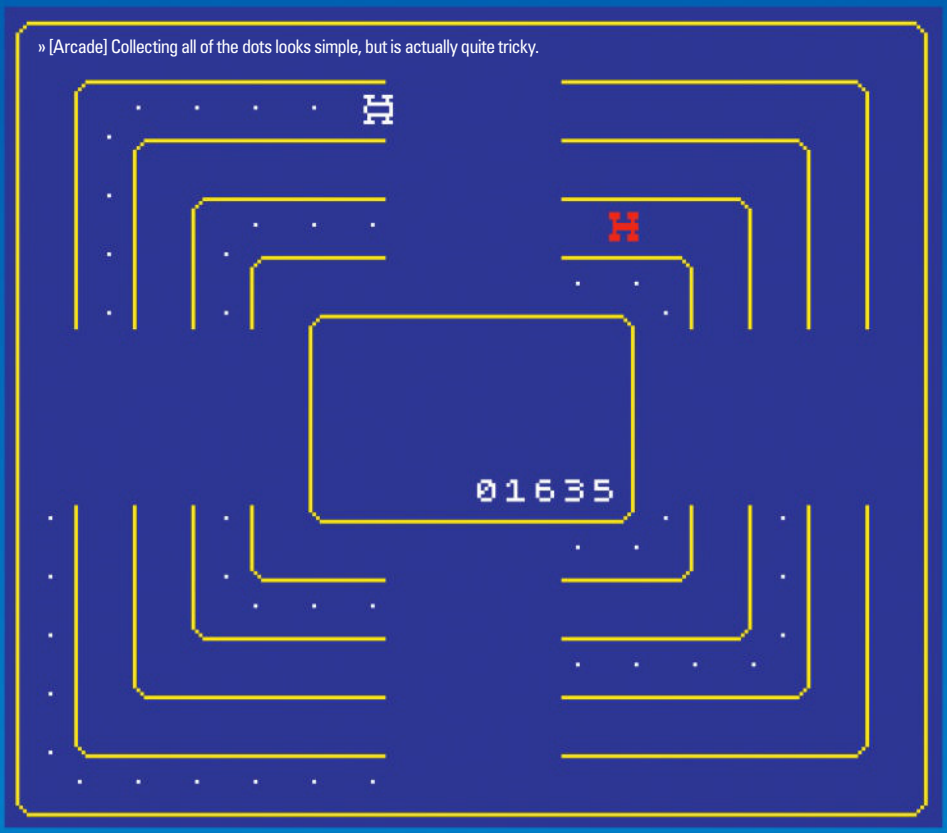
Was it easy collecting data for the car?
"Only a tiny number of Testarossas had been brought into Japan, so we had some trouble finding an owner to help us with collecting car data. Eventually, five of us squeezed into a small car and drove for three hours to see a [privately owned] Testarossa. We took photos of it from every side, at five-degree intervals, and we also recorded the sound of the engine."

How did *Out Run*'s iconic music come about?
"I remember selecting a number of tunes to be used as points of reference. In those days we couldn't use samplers or PCM sound sources, so the timbre of the tunes was a synthesiser creation, which led to us having some difficulty when attempting to trim data quantities for playback of the tunes. I remember wanting some guitars and voices in the soundtrack, but it was impossible to achieve with the technology of the time, so I ultimately had to give up."

Was anything left out of the game?
"I was only able to put around half of the things I wanted to do into *Out Run*. Because of budget and development time limitations, some of the content I'd planned had to be squeezed or cut. I'd made preparations for eight individual characters and I wanted to include various events at each checkpoint, which would have made the player experience a story; something like *The Cannonball Run* film. I also wanted to give players a choice of supercars to drive, so that they could enjoy differences in car performance."

Why does *Out Run* have such memorable scenery?
"I wanted to make a game where you could enjoy magnificent changing scenery and landscapes while driving, and really get a nice sensation from playing it – not a stoic racing style of play."

***Out Run* evokes a feeling of summer whenever we play it. Was that intentional?**
"Yes, that's correct. I wanted to make stages where you could smell the fresh fragrance of new leaves and flowers, like in the green meadows of Switzerland, so I'm happy that you were able to sense that."



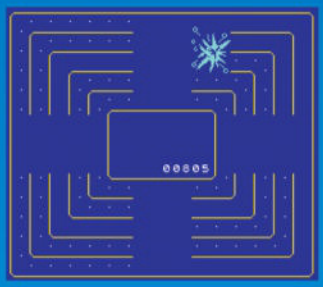
» [Arcade] Collecting all of the dots looks simple, but is actually quite tricky.

HEAD ON 1979

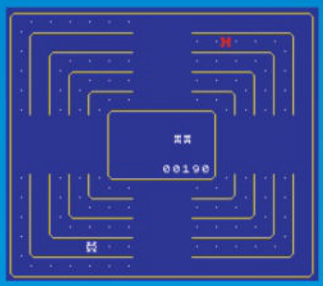
LIVE FAST, DIE IN A CRASH

While *Pac-Man* is generally considered to be the first maze-based pill muncher, Sega's *Head On* actually beat Namco's iconic mascot by coming out a year earlier. Taking control of a basic-looking race car, your aim is to drive around the simply constructed maze, collecting all the dots as you go. An opponent (typically controlled by AI) is doing exactly the same thing, but moves in the opposite direction, meaning you have to switch between the available lanes and make judicious use of the accelerator to avoid a nasty crash.

It proved popular for Sega, leading to several clones, including Konami's *Fast Lane*, which arrived in 1987 with significantly upgraded aesthetics and gameplay mechanics. There's even an officially licensed update for Nintendo's Game Boy, developed by Tecmo and released internationally as *Power Racer*.



» [Arcade] This is exactly the kind of big collision you're supposed to avoid. We failed.



» [Arcade] By kicking the walls, Pengo can temporarily stun the Sno-Bees.

» [Arcade] Beat a stage by lining up three diamond blocks for a big bonus.

PENGO 1982

ANTARCTIC ANTICS

Pengo the penguin is on a mission, and that involves destroying as many Sno-Bees as penguinly possible. Although he's vastly outnumbered, Pengo is a versatile little fellow, and can kill his adversaries in a number of different ways, including crushing blocks that contain unhatched Sno-Bees and squashing them between multiple blocks that he's slid towards them. If the Sno-Bees are still alive after two minutes (and Pengo hasn't lost a life), the fearsome foes will transform into Blobs and attempt to exit the stage.

The original release of Coreland's game featured a version of Gershon Kingsley's *Popcorn*, but this was later removed. Its popularity meant it was converted to numerous Atari systems including the Atari 2600, and a multiplayer update was released in arcades in 2012 as *Ge-Sen Love: Plus Pengo*, which was later ported to Xbox 360 and Switch.

POWER DRIFT 1988

UP AND DOWN AND ALL AROUND

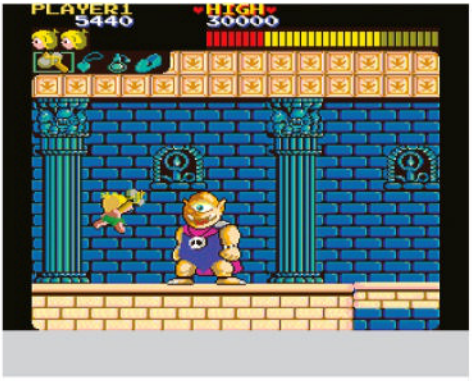
Racing games were well-suited to Sega's Super Scaler technology, and *Power Drift* remains one of the best examples. Arguably a game best experienced in the arcades, *Power Drift* features huge and colourful karts, along with an exotic roster of different drivers to choose from. The deluxe tilting cabinet greatly enhanced the elevated roller-coaster-style tracks, with 25 varied stages constructed entirely from sprites to master, including some special courses that let you use the bike from *Super Hang-On* as well as *After Burner*'s jet. Numerous home ports exist for the game, but like various other Super Scaler games, few did *Power Drift* justice. Indeed, it wasn't until the release of the Saturn conversion a decade later that *Power Drift* received a decent home outing.

» [Arcade] Seeing the undulation of the track ahead was quite an exciting and unique experience.

VIRTUA COP 1994

COP A LOAD OF THIS

Yu Suzuki and his team at Sega AM2 came out guns blazing with *Virtua Cop*, delivering a high-octane action game that reinvigorated the lightgun shooter. Memorable for its real-time polygon graphics, outstanding animation and the ability to perform Justice Shots (disarming an enemy without killing them) it remains highly entertaining today. Two sequels and various home conversions followed, with the last released in 2003.



WONDER BOY 1986

FRUIT PURSUIT

Escape's slick platformer was huge, spawning countless sequels as well as an alternate series called *Adventure Island* on Nintendo systems. In retrospect it's easy to say why it proved so popular as it remains a fast-paced platformer, with hero Tom-Tom jumping over enemies and constantly grabbing fruit in order to top up his dwindling vitality bar. It's currently available as part of *Wonder Boy Anniversary Collection* for Switch and PS4.

CARNIVAL 1980

ALL THE FUN OF THE FAIR

This strategic and entertaining shooter is notable for being one of the earliest arcade games to feature a bonus round. The main stage requires you to hit as many high-scoring targets as you can with limited bullets. You then move to the bonus stage, which requires you to shoot a bear as many times as possible before it ambles off the screen. It was developed by Gremlin Industries, which Sega acquired in 1978.

ALIEN SYNDROME 1987
GAUNTLET WITH ALIENS

Sega's top-down shooter has elements of *Gauntlet*, but is clearly inspired by Ridley Scott's *Alien*. Each sprawling, maze-like stage is crawling with gloopy-looking aliens, and can be completed by rescuing a set number of your comrades and defeating the level's gruesome guardian. Unlike Atari's *Gauntlet*, *Alien Syndrome* only caters for two players. It was ported to numerous home systems and received a disappointing sequel for Wii and PSP in 2007.

» [Arcade] Bosses can be tough to take down, so hammer them with as much firepower as possible.

» [Arcade] Could the *Herbie* films have inspired Sega's arcade game? We may never know.

UP'N DOWN 1983
LEAPS AND BOUNDS

Sega continued its interest in isometric arcade games with this entertaining maze game that shares elements with Namco's *Rally-X*. As in Namco's fast-paced game, the aim of *Up'N Down* is to collect a set number of flags, but here you can destroy enemies by leaping over them. It's also possible to jump across gaps in the track, although you'll need to get the timing just right in order to succeed. It's tough, but very satisfying.

DECATHLETE 1996
GOING FOR GOLD

***DecAthlete* lets you take part in ten entertaining events, including long jump, pole vault, shot put and 1,500 metres) and has everything you'd expect from the genre, including exaggerated stereotypes and plenty of button-bashing action.** While its controls are a little more nuanced than those of many of its peers, a focus on arcade action and cheerful-looking aesthetics ensures *DecAthlete* is a huge amount of fun. A winter-themed sequel, *Winter Heat*, arrived in 1997.

» [Arcade] Getting a good speed and selecting the correct angle is critical if you want that World Record.

» [Arcade] Frankly, the realistic hair movements were just AM2 showing off a bit.

» [Arcade] Jeet kune do expert Jacky gives Akira an extremely close-up look at his new trainers.

VIRTUA FIGHTER 1993

THE POLYGONAL PUNCH-'EM-UP

AM2's smash hit is the most iconic game to run on the Model 1 board, thanks to the appeal of its convincingly animated 3D fighters. It had more than superficial appeal though – its often-imitated approach to fighting essentially codified the conventions of the genre in 3D, with a more grounded style that stripped away the projectiles and emphasised close-range combat. The easily learnt, rarely mastered action launched an enduring series, with a conversion spearheading Saturn's launch and arcade sequels whose technological advances quickly dated those flat-shaded models.

SUZUKI SENSEI SPEAKS

VIRTUA FIGHTER DIRECTOR YU SUZUKI REFLECTS ON A GROUNDBREAKING GAME

How different was the process of making a 3D fighting game compared to *Virtua Racing*?

"As opposed to cars, the human form has many joints which bogs down the processing, so high-speed algorithms were needed. And besides that, the body-to-body collision processing was also complicated, creating a mountain of problems that piled up."

You took martial arts training during development, and had the AM2 team do the same. Why did you do this?

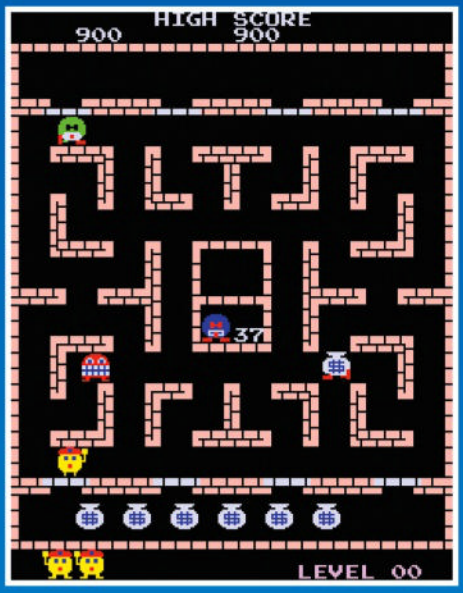
"This was back before motion capture, so all motion was created by hand by our motion designers. We ended up with a lot of unrealistic motion created by designers who had no experience in martial arts. So, with some basic punching and kicking practise, we were able to go into production with a team of people who grasped the mechanics involved in that kind of motion."

How were character designs and fighting styles chosen for *Virtua Fighter*?

"I thought eight different character choices would be about right. For one, I just like the number eight. We did a lot of tinkering to differentiate the fighting styles and designs of the characters to bring about their individuality. The peculiarities of different fighting styles are quite distinct. Centring first on quan fa (Chinese boxing), we then added other styles like pro wrestling and capoeira."

What made you decide to include Ring Out victories in *Virtua Fighter*?

"We trial tested several ways to decide victory, but when it came to trying out elements of Japanese sumo wrestling, I felt that it provided a nice sense of tension. Upset victories could be had at the ring boundary, and I thought it was unique that play quality could vary by adjusting the ring size."



» [Arcade] Even though it shares a maze and a yellow hero, Sega's game is a very different experience to *Pac-Man*.

ALI BABA AND 40 THIEVES 1982

SAVE YOUR STASH

This interesting *Pac-Man* clone is unusual, as you're typically the most dangerous character in the maze. The aim is to protect your gold from being stolen, and while many thieves can be seen off by simply running over them, the red thief is impervious unless you grab one of the power-ups that expands you in size and lets you crush him. Destroying all 40 allows you to move to the next stage.

» [Arcade] As with most music games, maintaining a combo is essential for success.

SAMBA DE AMIGO 1999

SHAKIN' MONEY MAKER

Sonic Team has never been a frequent contributor to Sega's arcade output, but it certainly made an impact with this music game. Following the success of Konami's arcade music games like *Beatmania* and *Dance Dance Revolution*, *Samba De Amigo* ditched the club atmosphere in favour of a carnival vibe. Players need to shake maracas to the beat of songs like *Samba de Janeiro* and the *Macarena*, while monkey mascot Amigo and his pals dance around in the background, with their level of excitement depending on your level of play. Home versions on Dreamcast and Wii added minigames and became party favourites, and the series is set to return on Switch with *Samba De Amigo: Party Central*.

» [Arcade] Amigo has made cameo appearances in quite a few Sega crossover games.

HOW TO START A PARTY

DIRECTOR SHUN NAKAMURA LOOKS BACK AT MAKING SAMBA DE AMIGO

How did *Samba De Amigo* come about?

"*Samba De Amigo* was conceived in 1999. At that time Japan was experiencing the same kind of music game boom that [took] over Europe and America [in the late Noughties], but I think [Japanese rhythm-action games] were trying a bit too hard to appear cool and therefore were quite difficult to enjoy actually playing. Games are supposed to be fun, but those games were too difficult to approach – I remember thinking, 'I really want to play music games that are just fun…' So it was with that in mind – wanting to increase the fun quotient [of Japanese rhythm-action games] – that I produced the plans for *Samba De Amigo*."

Why insist on using maracas as the instrument players had to use?

"I think guitars and drums and such difficult instruments are cool, but you have to use your head – you have to think when playing them – and the threshold [for being able to play] is quite high. As far as I was concerned, anyone could easily have some fun just by shaking a pair of maracas, so I felt that maracas were far and away the best choice of instrument for this project."

Was there much pressure when making the game?

"*Samba De Amigo* was seen within Sega as being something of an experimental title. We were told that if the arcade location tests were a failure, the project would be cancelled immediately. Because of that, we felt we had to work extremely hard to ensure that it would be a success. The production team on *Samba* was less than ten people – it was a really small team. And on top of that, most of the developers were newcomers who had no previous game development experience. That's how experimental [Sega deemed] this project to be…"

How did you choose music tracks?

"It seems that many people initially thought of *Samba* as a game that specialised in Latin music, but as far as we were concerned there wasn't any reason for us to be limited to Latin music. Generally speaking, we selected bright, cheerful and fun tracks that would be impossible to play along to nonchalantly – the kind of tunes you have to be really stupid [with the maracas] to enjoy. We also thought it was important to choose music that most people would have heard somewhere, be it on TV or in commercials, even though they might not know the names of the tracks."

» [Arcade] A fully powered-up magic attack can do devastating damage.

GOLDEN AXE 1989

A FANTASY EPIC

Sega ignored the urban cityscapes that were so popular with scrolling fighters at the time, instead giving *Golden Axe* a distinctive fantasy setting filled with powerful magic, reptilian beasts to ride and dangerous weapons to wield. The bold move instantly endeared it to arcade fans, and it soon received numerous home conversions, with Sega's own Mega Drive port being one of the early draws on the console. While an excellent arcade sequel, *Revenge Of Death Adder*, exists, the separate Mega Drive exclusive sequels are nowhere near as good.

» [Arcade] Fighting on an eagle's back was a (fantasy) world away from other scrolling fighters of the time.

REVISITING GOLDEN AXE

MAKOTO UCHIDA DISCUSSES HIS FANTASY FIGHTER

What are *Golden Axe*'s influences?

"My father loved action movies, and I used to watch them with him. During the development of *Golden Axe*, I rented a video of *Conan* [*The Barbarian*] and watched it until the tape was worn… Of course, I was also inspired by *The Lord Of The Rings*. I bought many illustration works based on Middle-earth, and used them as reference materials. If I could, I would vote Gandalf for president!"

Why are there three playable characters but only support for two players?

"We did consider that plan, but we gave up due to the hardware specs. The maximum number of characters, including the enemies that we could display and operate at once, was six. But by the time we created the next title, *Revenge Of Death Adder*, the hardware specs had allowed us to make the game playable for up to four players simultaneously."

Why do the characters use magic?

"I happened to have knowledge of element-based magic, so I simply applied it. Although we did not select water, because water would be a healing magic, rather than an attacking magic."

Why does *Golden Axe* remain so popular?

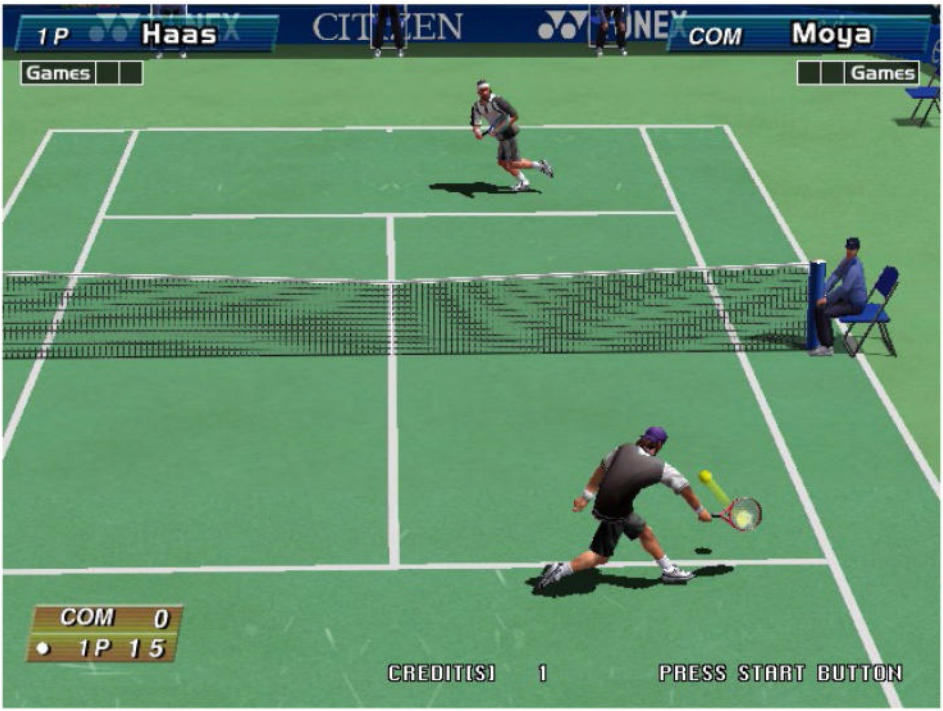
"Probably because it was one of the earliest action games that was based on a fantasy world of swords and magic. The visual effects of the magic [spells] were pretty neat for a title back then, and probably people remembered it with the surprise of seeing new stuff."

» [Arcade] Huge, colourful sprites and excellent animation made *Spider-Man The Video Game* instantly recognisable.

SPIDER-MAN THE VIDEO GAME 1991

TINGLING FUN

Scrolling fighters proved to be quite popular for licensing, but Sega went a step further with its slick adaptation of the *Spider-Man* brand. While it features plenty of satisfying fighting and caters for up to four players (Spidey is joined by Hawkeye, Black Cat and Sub-Mariner), Sega moves beyond expectations of what's typical for the genre. At certain points in the game the action zooms right out, presenting a miniature version of the superheroes and emphasising platforming, which certainly makes it stand out from its peers. It's highly entertaining, particularly when playing as Spider-Man, as you can scale walls and even hang upside-down. Spidey has plenty of scraps with classic enemies as well, including Venom, Sandman, Doctor Doom and Kingpin. Sadly, *Spider-Man The Video Game* was never ported to home systems, meaning many didn't get to experience it.

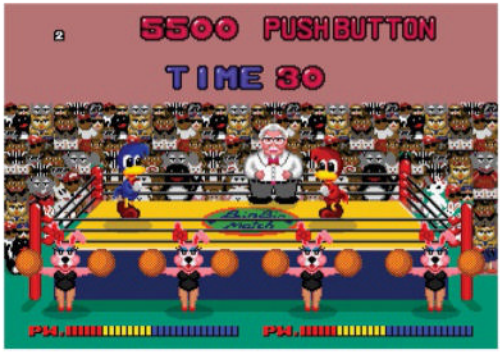


VIRTUA TENNIS 1999
ADVANTAGE, SEGA

Known as *Power Smash* in Japan, *Virtua Tennis* proved you didn't need overly complex controls to create an exciting game of tennis. It features an intuitive control system and a large number of male stars from the period, including Tim Henman and Tommy Haas, and received an excellent Dreamcast port. Numerous sequels followed, with the last title, *Virtua Tennis Challenge*, debuting on mobile in 2012.

DYNAMITE DUX 1988
FAR FROM FOWL

Few arcade games can match the surreal nature of *Dynamite Dux*. Sega's scrolling fighter features boxing crocodiles, mortar-using foxes, disembodied dog heads and all manner of bizarre foes. There is a large number of different weapons to use, from rocks to homing missiles, while you can pull off comically oversized punches by holding down the fire button. Colonel Sanders even oversees the bonus boxing stages.

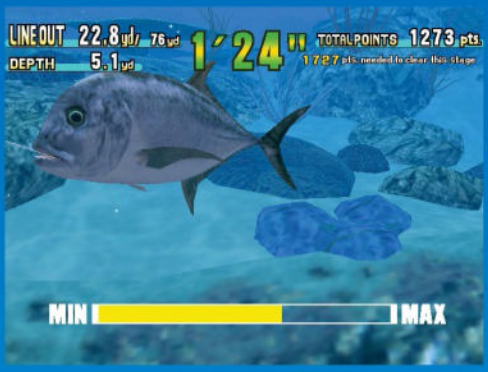


FLICKY 1984
CHEEP TRILLS

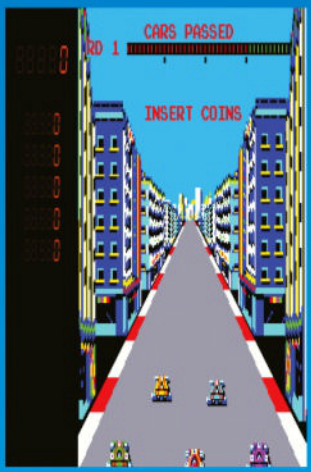
Help Flicky guide a bunch of cute Chirps to safety before they fall prey to marauding cats. The tiny birds are scattered across the playing field, and will dutifully follow Flicky after she's moved past them. While Flicky can't fly, she is able to fend off enemies with the aid of a variety of household items. *Flicky* was converted to numerous systems, including Sega's Mega Drive.

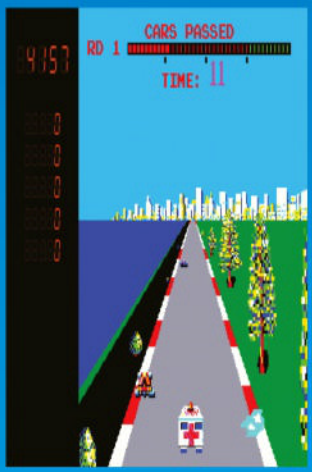
SEGA MARINE FISHING 1999
GET HOOKED

***Sega Bass Fishing* may have bitten first, but this 1999 follow-up proved the series still had plenty of bite.** You're still catching fish against a strict time limit, but the locations are more varied and there's a huge number of species to catch, from stingrays and marlins to dolphin fish. Hooking your first fish remains tremendously exciting, while the battle music effortlessly matches your epic struggles to land them.



» [Arcade] Land this whopper of a fish and it should be enough to get you to the next stage.





TURBO 1981
POLE POSITION

This impressive racer arguably set numerous firsts for the popular arcade racing games that would follow in its wake. It features racing through both urban and rural environments, changing weather conditions and hazards to avoid, as well as different landscapes, hills and much more. It's a frantic race against time as you attempt to overtake 30 other racers, and was eventually ported to ColecoVision and Intellivision.

» [Arcade] Sega is famed for its blue skies and they don't come bluer than in *After Burner*.

» [Arcade] Pulling off spins was a great way to avoid incoming missiles.

AFTER BURNER 1987

THE NEED FOR SPEED

Shortly after making *Space Harrier,* Yu Suzuki had the resources to create his original plan for a military-based arcade game. Riffing off the hit Tom Cruise film *Top Gun* (the plane you control is a F-14 Tomcat), *After Burner* throws you into a frantic gauntlet of enemy planes and helicopters, which are all intent on sending you to your maker. Sickeningly fast and with the ability to pull off gut-churning 360 degree spins, *After Burner* is another Super Scaler game, and another that received countless home ports. Sadly, very few of them at the time were able to capture the sheer adrenaline rush that Suzuki's game offered (the definitive release is arguably the 2015 Sega Ages version for the 3DS). Numerous sequels followed, including the incredible *After Burner: Climax*.

» [Arcade] Stage 4 has some great lightning effects which really add to the game's creepy atmosphere.

THE HOUSE OF THE DEAD 1996

GHOUL PATROL

While it would be eclipsed by its later sequel, Sega AM1's *The House Of The Dead* nonetheless gave the lightgun genre a much-needed shot in the arm when it debuted in 1996. Its gruesome horror theme built on the ghoulish antics of earlier shooters like Konami's *Crypt Killer*, while the ability to open up new routes if you were able to save civilians in time certainly added to the game's immense replay value. Famed for its challenging bosses, multiple endings and some truly god-awful voice acting, *The House Of The Dead* proved popular enough for Sega to port it to its 32-bit Saturn and it would go on to receive numerous sequels. It was even remade for contemporary consoles in 2022, proving that great game concepts never truly die.

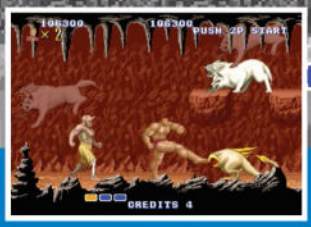
SHINOBI 1987

RED-HOT NINJA ACTION

While it was clearly inspired by Namco's *Rolling Thunder*, Sega's arcade game is very much its own creation thanks to a strong ninja theme, stylish presentation (each level takes the form of a mission briefing) and some unusual bosses that range from a giant samurai to a heavily armed attack helicopter. Fast paced and with some tremendously challenging stage design, *Shinobi* is also memorable for its excellent bonus round that sees you trying to mow down countless ninjas with an endless supply of shuriken before they can land in front of you. It also boasts some truly magnificent tunes. *Shinobi* was ported to numerous home systems at the time, and turned into a surprisingly solid franchise for Sega, with the last original game, *Shinobi*, appearing on 3DS in 2011.

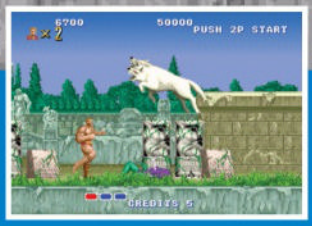
» [Arcade] Fail *Shinobi*'s bonus round and this dude will glare disapprovingly at you.

» [Arcade] The first boss leaves quite the impression, as it continually chucks its heads at you.



» [Arcade] Makoto Uchida clearly had a soft spot for the Chicken Leg as the enemy would turn up again in *Golden Axe*.

» [Arcade] The monsters you transformed into certainly felt overpowered at times, but that simply added to the fun.



ALTERED BEAST 1988

A TRANSFORMATIONAL EXPERIENCE

Sometimes a game doesn't need to be good in order to grab attention, it just needs a cool gimmick. That was certainly the case with *Altered Beast*, an early attempt by Makoto Uchida to transfer the fantasy tropes he loved to the Eighties arcade scene. While it feels a little crusty today with its limited moveset, straightforward action and simplistic mechanics, *Altered Beast*'s epic transformations still manage to impress. Watching your warrior slowly level-up until he turns into one of several powerful beasts still looks imposing, while the oddball enemies and huge bosses remain extremely striking. Like many Sega arcade games, *Altered Beast* soon clawed its way to the home systems, with the Mega Drive version being particularly decent and acting as a pack-in game in the West. Just ignore its two sequels!

A BEASTLY CREATION

MAKOTO UCHIDA ON THE GENESIS OF ALTERED BEAST

How did *Altered Beast* come about?

"I wanted to surprise everyone by creating an action game with flashy visuals that no one had ever seen, with a specific emphasis on the characters and the environment. I thought such things could easily be expressed in the game world through CG. I made the appearance of the boss characters as impressive as I could, but the most successful presentation was the transformation sequence [starting with that of the Wolf]. It was finally achieved by asking the game's lead artist to focus just on this for an entire month…"

What was it like developing the game?

"*Altered Beast* was my first game development experience. I didn't know how to create the fun in the gameplay and struggled a lot. I managed to build the gameplay balance – the most important part of the game – with the advice from an experienced lead programmer."

How did you choose the different beasts?

"There are five completely different worlds in *Altered Beast*. I chose beasts that would best match the environment that could reign as the most powerful existence in that world."

What can you tell us about the special mechanics you had planned for *Altered Beast*?

"We planned to use a button that had a sensor to detect the strength of the pressure for *Altered Beast* at the beginning. However, the development of the button didn't go well internally. We consulted with the company who owned the patent of pressure-sensitive devices but they couldn't make one as the order numbers were small and so this idea was killed. I envy today's developers as the pressure-sensitive devices are used for most of the consumer videogames now."

Did this affect the game at all?

"Because of the [lack] of a pressure-sensitive sensor button, the number of character actions fell to half from the original concept and the complexity of the game was decreased by this. As a result, players got tired of the game relatively soon."

Why is there a reference to platformer *Alex Kidd* in the game?

"The reference to *Alex Kidd* was included as the lead programmer had worked on the game. As the other team members had also worked on *Shinobi*, we felt that there should be some reference to that game also… please look out for them."

What was it like seeing the game tested in Japanese arcades?

"The best thing [about making the game] was that I could show my idea to everyone and surprise them. I was so thrilled when I saw, not only the players, but the people around the players uniformly surprised at the video arcade."

Were you surprised by *Altered Beast*'s notable success?

"As *Altered Beast* was not so popular in Japan I was really surprised with the high popularity in the Western market. I'm really proud that people still remember and play my game. I was told by my boss, 'You are already a legend!' the other day, but I think of myself as still [relatively not well-known] in this industry."

SEGA RALLY CHAMPIONSHIP 1995

LONG MEDIUM RIGHT

When you tear off the starting line of the Desert course in *Sega Rally Championship*, you know you'll cross the finish line of the extra Lakeside track less than five minutes later – and that's only if you're good. But the feel of shifting from tarmac to dirt roads, the exquisite course designs and the challenge of taking first place ensured that players dropped coin after coin into cabinets around the world. The Saturn conversion ranks as one of the system's finest games, regardless of genre, and the later Japan-only version for PlayStation 2 is practically arcade-perfect.

» [Arcade] The tight curves of the Mountain course are doubly challenging with rival cars present.

REVISITING RALLY

SEGA AMUSEMENTS INTERNATIONAL R&D HEAD PATRICK MICHAEL EXPLAINS WHAT MAKES SEGA RALLY SO SPECIAL

When did you first encounter *Sega Rally*, and what did you make of it?

"Probably in an arcade in Weston-Super-Mare. For the time it was so realistic, the physics and the sensation that you got from the force feedback was amazing. You could almost feel the texture of the road surface and knew instinctively when you were about to slide out. I think that my friend and I spent a small fortune trying to best each other. We were hooked from the first play and could not stop until we mastered Lakeside."

***Sega Rally*'s deluxe cabinet incorporated a force feedback wheel and seat vibration. How important is this physical sensation to the overall experience?**

"I believe that it is vital. Rally is a visceral experience, it is all about feeling the road and your car's interaction with it. It is about constantly looking ahead, split-second timing and both delicate and aggressive control. Without physical feedback you lose a lot of that connection with the car, and have to rely on purely visual and audio cues to understand the handling of your car."

Why do you feel *Sega Rally* was so popular?

"I think it was the realism, the sensation of speed and super-tight controls. It was a game that you had to master and it rewarded those who were willing to put the time in. I think that it was one of the first true arcade simulations that provided casual and core players alike with a glimpse of real rally driving in such beautifully realised environments."

STAR WARS ARCADE 1993

A FORCE TO BE RECKONED WITH

Sega worked its magic on three *Star Wars* arcade games over the years, and this Model 1 outing was the first. The game's deluxe sit-down cabinet allowed you to act as a lone pilot and gunner or divide the duties with a friend as you took on a series of increasingly dangerous missions. After starting out by taking out TIE Fighters in open space, you'd progress to navigating the twisting, treacherous path to the Super Star Destroyer's engine, before battling on the surface of the Death Star and eventually taking on the iconic trench run. The only home conversion of *Star Wars Arcade* landed on 32X, and it became one of the very few good reasons to own the much-maligned Mega Drive upgrade.

JAMBO! SAFARI 1999

A DRIVE ON THE WILD SIDE

This Naomi release is one of the more unique concepts to have made it to arcades. Playing as one of four park rangers, you need to research animals – and in order to do that, you have to drive after them at high speeds, hook onto them with a lasso and finally ensnare them in a net. You can even go after poachers and lock them in with lions.

» [Arcade] Your car can tip over during chase sequences if you're not careful.

» [Arcade] This angry boss seems rather at odds with its colourful surroundings.

FANTASY ZONE 1986

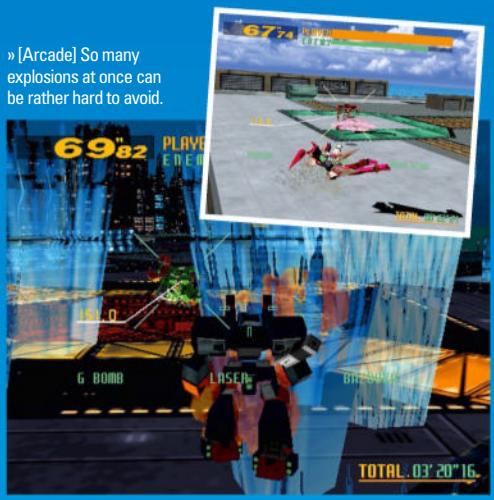
THE CUTE SHOOTER

Here's a bright, inviting and absolutely ruthless example of the cute-'em-up subgenre. *Fantasy Zone* uses free-scrolling stages like those of *Defender*, and tasks you with destroying enemy-generating bases before boss battles. Uniquely for the time, access to power-ups comes through a shop system, which allows you to spend the coins dropped by defeated enemies on speed and weapon upgrades.

VIRTUAL ON: CYBER TROOPERS 1996

ROCK 'EM SOCK 'EM ROBOTS

Battles between big bipedal robots have been a staple of Japanese media for years, and *Virtual On* gave players a chance to get in the cockpit of one of eight fighters including the balanced Temjin, nimble Fei-Yen and hulking Raiden. A twin-joystick system allows you to dash and leap around 3D arenas, unleashing long-range projectile attacks or closing in for highly damaging melee attacks.



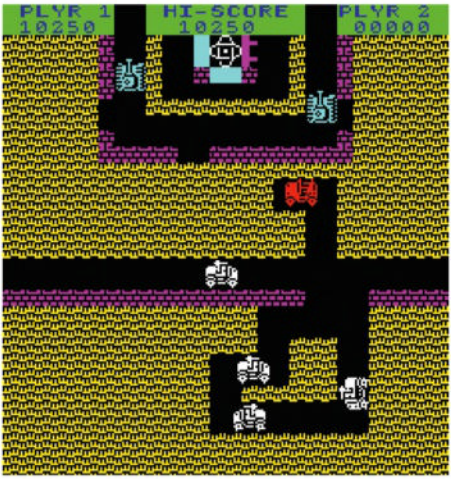
» [Arcade] So many explosions at once can be rather hard to avoid.

ARABIAN FIGHT 1992

DESERT DUST-UP

Another four-player brawler from Sega, and another that utilises impressive scaling effects. *Arabian Fight* immediately sets itself apart from similar games by featuring a lot of action that takes place in the foreground – enemies jump into the fray and player characters take up the bulk of the screen as they unleash devastating magical attacks. It's fun, but a little repetitive due to its limited combat moves.

» [Arcade] Encounters with bosses, like this snake woman, are frequent in *Arabian Fight.*



BORDERLINE 1980

BREAK THROUGH AND CONQUER

This inventive little shooter certainly entertains across its four distinctive stages. Some take the form of overhead shooters, where you must drive your Jeep behind enemy lines, destroying enemies as you go, while other levels have you moving through underbrush and creating tunnels that enemies can then follow you through. A port was eventually created by Sega for its SG-1000 console in 1983.

ZAXXON 1982

A DIMENSION ABOVE THE REST

While it obviously takes influence from Konami's *Scramble,* Sega's take on the shoot-'em-up pushes the idea far further. Graphically it remains excellent, with a striking isometric viewpoint that allows you to fly both over and around parts of the treacherous landscape. Immensely popular in arcades at the time of its release, Sega's game was converted to numerous home systems at the time, and received several sequels.

SPACE HARRIER 1985

SPECTACULAR SUPER SCALER ACTION

Thanks to its wonderful music, iconic voice samples and a deluxe version that boasts a gigantic hydraulic chair, *Space Harrier* remains one of Sega's best Super Scaler games. While it was ported to countless home systems at the time, few of them were able to capture the giddying excitement of the arcade original.

» [Arcade] This is the first boss you face in the game. They get weirder and weirder the further you progress.

CREATING THE FANTASY ZONE

YU SUZUKI ON THE ORIGINS OF SPACE HARRIER

What was the original idea behind *Space Harrier*?

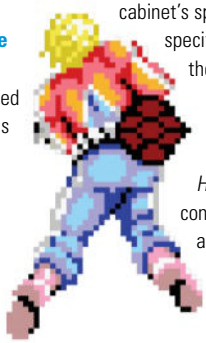
"The original plan was supposed to be the military Harrier plane. However, there was not enough memory space for the graphics, so we changed the format to science fiction. Thus, we just kept the name Harrier, and it became *Space Harrier*."

There's a lot of invention there – what's the inspiration for the Fantasy Zone?

"I liked the artist Roger Dean and the movie called *The NeverEnding Story*, so I created the world as homage to them."

How important was the Super Scaler technology to *Space Harrier*'s success?

"The Super Scaler technology was important to increase speed. However, if I think about how important it was for the game to succeed, I do not think it was that important."



Tell us about the hydraulic cabinet design.

"The Mechatronics team was developing the cabinet separately. Then later on we modified it to suit *Space Harrier*. When it came to modifying it, we discussed the cabinet's speed, durability performance and throttle's specification, for example. Of course, we regulated the cabinet control system by ourselves."

Why do you think it remains so popular?

"There are not many games like *Space Harrier*. And even now if you play it, it has good controllability, and it's easy to take a steady aim and hit the enemy. I believe this pleasant feeling of hitting the enemy is the most attractive part of this game."

CRAZY TAXI 1999

REINVENTING THE ARCADE RACER

Bored of traditional racing games, Kenji Kanno spun the genre on its head. The result was *Crazy Taxi*, a blisteringly chaotic thrill ride that saw you careening around the streets of San Francisco while listening to the likes of The Offspring and Bad Religion. Its huge success meant it was ported to various home consoles.

» [Arcade] That huge arrow handily points to your next drop-off point.

HOW SEGA MADE CRAZY MONEY

CRAZY TAXI'S DIRECTOR KENJI KANNO REVISITS HIS HIT ARCADE GAME

How did you come up with the concept for *Crazy Taxi*?

"One day I was out driving for fun but I got stuck in traffic. But the other side of the road was completely clear! When I saw that, I thought there must be hundreds of other people thinking like me – if I could drive on the other side of the road, I could have a lot more fun and get there quicker. I think that a lot of like-minded people would find that fun."

Why was *Crazy Taxi*'s city based on San Francisco?

"Having loads of hills would make it more interesting as a game, I think that suits the concept, and I wanted it to be bright and colourful in its feel, and I feel that the US and San Francisco has that kind of bright, light-hearted feel that matches up with the concept."

Do you think *Crazy Taxi*'s soundtrack played a big part in how popular the game became?

"Before making the game, I actually already had the music that I wanted in the game set first, and then had the creators go away and design the game around the music, so that the rhythm would be in sync with the music. So yes, music was one of the key pillars, and once we shipped the game people really appreciated the music, so I think it is definitely one of the key success factors of the game."

» [Arcade] For *Daytona* enthusiasts, perfect drifts are an art form of their own.

DAYTONA USA 1994

LET'S GO AWAY

Admit it – just reading that title caused a memory of Takenobu Mitsuyoshi's golden voice to echo in your mind. That catchy vocal soundtrack is only one of the reasons why Sega's stock car racer became one of the most popular arcade games of all time, as the brand-new Model 2 arcade board ensured that it was also visually stunning thanks to its use of texture-mapped 3D graphics. Wild eight-player races on the beginner oval track ensured plenty of casual appeal, while amazing drifting mechanics kept the hardcore time attack crowd coming back to Dinosaur Canyon and Seaside Street Galaxy time after time. Despite the release of a good sequel in 1998, demand for the original *Daytona USA* has remained so strong that it was even reissued in a licence-free form as *Sega Racing Classic* in 2009.

» [Arcade] Trading paint with rival racers is a key part of the *Daytona* experience.

» [Arcade] Hey, we recognise that hedgehog! Why isn't he carved into more cliffs?

TUNED TO PERFECTION

THE CREATION OF THE ICONIC RACER, AS REMEMBERED BY DIRECTOR TOSHIHIRO NAGOSHI

Were you familiar with stock car racing before working on *Daytona USA*?

"Initially I had no knowledge. When I went to the US to have a meeting about the Model 2 system board, I happened to get the tickets for a race. That was the first time I ever watched such a race, as in Japan, car racing typically meant Formula 1 for the vast majority of people. I remember it being a quite a new experience for me."

What sort of research into racing did you do before starting development?

"Before we started the development, I consumed as many video and books about NASCAR as I could get my hands on. However, despite the extensive research, it was difficult to convey the excitement and fascination of NASCAR racing to the staff in Japan at the time."

How did your experience on *Virtua Racing* help when developing *Daytona USA*?

"It was invaluable for me to have the experience of the basics of 3DCG video expression, such as the approach to camera and lighting. Also, being in the same race game genre, I felt that I had been able to do the things in *Daytona* that were left undone in *Virtua Racing*; in that sense my experience was well utilised."

***Daytona USA* was your first game as both director and producer. How did you feel about this new role?**

"It was a huge responsibility for me, but at the same time this was a game implementing the new technology for the first time, and being able to create such a game as a leader is not a chance that comes by often. I tried my best to have as much fun as I could. But of course, in reality it was not that easy, and I often found myself stuck in thought."

Drifting wasn't common in arcade games at the time. Why did the team decide to include it?

"Initially, the cars didn't drift in the game. If you think about it, if you were drifting in an actual NASCAR race, you are on a clear path to death! But as soon as the decision was made in the direction that the game will not be a simulator, but a powerful and happy driving game, I thought drifting would be a necessary addition to the game.

We experienced various hardships during development, but when something was not going well (which usually meant that driving the car was not fun), it would always come down to, 'Should we change the car's handling?' or, 'Should we adjust the shape of the circuit?' There were many heated discussions within the team."

***Daytona USA*'s eight-player races were very popular. What balancing was required in order to keep them fun?**

"The idea was to make an eight-car brawl with lots of contact. As a driving game, the driving of the car is, of course, the basis of the game, but obstructing other players and even making them crash is something that can be done only in a game. I thought these aspects of racing would be an important characteristic of *Daytona*. The pleasure from smart driving is important, but this could be experienced in a time attack trial, so the emphasis on the multiplayer gameplay was on how we could maximise the feeling of engagement in a continuous battle."

CONGO BONGO 1983

TIME TO GO APE

Set across four distinctive levels, *Congo Bongo* requires you to get revenge on Bongo after he sets your tent alight. First, though, you must dodge the coconuts he throws at you, traverse a snake-filled swamp by hitching a ride on the back of a hippo and use holes to avoid a herd of stampeding rhinos. Beat four stages and you'll play your own prank on the great ape.

» [Arcade] Argh, a snake! Snake, snake, oh, it's a snake. No badgers, though.

» [Arcade] The bridge in the Big Forest course became an iconic *Virtua Racing* landmark.

VIRTUA RACING 1992

MODEL 1 FORMULA 1

After years of using scaling sprites to simulate 3D, *Virtua Racing* marked Sega's first foray into the real deal. Although the racing was excellent, it was the technology that drew crowds – not only the polygonal graphics with four camera angles, but the widescreen monitors and huge linked multiplayer setups too. The Mega Drive conversion required a special chip in the cartridge, and cost £70 at launch.

GUNBLADE NY 1995

MAYHEM IN MANHATTAN

Terrorists are attacking New York, and it's your job to stop them. How? By climbing into an advanced attack helicopter and gunning them down. Where AM2's *Virtua Cop* was a grounded introduction to the 3D lightgun genre, AM3 upped the ante with wildly swinging camera angles, agile enemies and big mounted machine guns. A Wii conversion appeared in a double-pack with *LA Machineguns* in 2010.

» [Arcade] When pursuing baddies, your helicopter sometimes drops right down to street level.

» [Arcade] You'll need to hit multiple targets to avoid becoming T-Rex food.

THE LOST WORLD: JURASSIC PARK 1997

THERE'S RUNNING AND SCREAMING

This spectacular Model 3 game was an enormous success for Sega in the late-Nineties, and it's easy to see why. The AM3 team didn't have access to the final script, so it doesn't follow the plot too closely and even includes dinosaurs that were cut from the film, but you won't have time to think about that as the prehistoric punishment is relentless from the start.

RAD MOBILE 1991

LIGHTS, WIPERS, ACTION

Sega might have played it safe with its first-ever 32-bit game by making a racer, but it features neat mechanics like the need to activate headlights and windscreen wipers at certain points of the game (it otherwise becomes much tougher). It is also notable for featuring an air freshener of Sonic The Hedgehog, which predates his own appearance in his Mega Drive debut.

» [Arcade] Racing over a crossing is undeniably dangerous, but the thrill is undeniable too.

retro GAMER

THE MINI

SEGA ARCADE COMPANION

9001

9000